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PERSONAL.

Mr. Dwight Morgan has been appointed Superintendent of Switches on the Chicago & Alton R. R.

Mr. H. C. Frick has resigned his position as chairman of the Board of Managers of the Carnegie Steel Co.

Mr. Claude A. McGill has accepted a position in the emergency department of the Pennsylvania Division of the New York Central & Hudson River R. R.

Capt. George Reyer, Superintendent of Water-Works at Nashville, Tenn., has resigned to accept the position of Superintendent and General Manager of Water-Works at Birmingham, Ala.

Prof. E. E. Barnard, astronomer at the Yerkes Observatory at Williams Bay, Wis., is visiting England for the purpose of securing a lens for the proposed Bruce photographic telescope.

Mr. J. James R. Croes has been appointed as one of the engineers for the Merchants' Exchange Committee, recently appointed to inquire into the questions relating to the water supply of New York city.

Mr. C. W. Vaughan has been appointed Supervisor of Bridges and Buildings on the Eastern Division of the New York Central & Hudson River R. R., in place of W. H. Smith, resigned, and F. L. Brooks, assigned to other duties.

Mr. C. M. Hunt, Assistant General Superintendent of the Fort Worth & Denver R. R., has resigned to accept service with another company, and M. H. Mills, Chief Clerk to the General Superintendent, has been promoted to the vacancy.

Mr. Winfield S. Haines has been appointed Division Master Mechanic at Newark, O., on the Baltimore & Ohio R. R., vice W. H. Harrison, Jr., resigned. Mr. S. B. Nason has been appointed assistant to the Mechanical Superintendent with office at Mt. Clare, Md.

Mr. John M. Hall, Vice-President of the Erie R. R., has been elected Vice-President of the New York, New Haven & Hartford R. R. Mr. Hall was born in 1842, and is a graduate of the Lawrence Scientific School. During the Civil War he served in the Corps of Engineers of the United States Army. Since then he has been connected with many of the railroads of the country.

OBITUARY.

Mr. Henry W. Conant, Supt. of the Gardner, Mass., Water Co., died Nov. 28, at the age of 54.

Mr. Charles P. Fletcher, a former railway contractor, died at his home in Fort Wayne, Ind., on Dec. 6.

Mr. Charles Calder Fowler, an architect and contractor, of Chicago, Ill., died on Dec. 6. He was born in Kingston, Ont., in 1839.

Col. Philander P. Lane, of the firm of Lane & Bodley, of Cincinnati, O., died Dec. 6. He was one of the founders of the Ohio Mechanics' Institute.

Captain J. C. Ayers, of the Ordnance Department of the Army, died on Dec. 8 at Washington from a fall from his bicycle. He was graduated from the Military Academy in 1871, and after three years' service in the infantry was transferred to the Ordnance Department, where he remained up to the time of his death.

Commander Charles P. Howell, who was Chief Engineer on the battleship "Maine" at the time of its destruction in Havana Harbor, died suddenly on Dec. 7, at his home in New York city. Commander Howell has been since last summer Chief Engineer at the Brooklyn Navy Yard. He was born 54 years ago at Goshen, N. Y., and was a graduate of the Naval Academy.

Mr. Frederick Koenig, a civil engineer, died Dec. 2, at his home in Allegheny, Pa. He was 48 years of age, and was born in Suderbruch, Hanover, Germany. For a number of years he was construction engineer for the Pittsburg & Western Ry., and was later employed by the Westinghouse interests and the Carnegie Steel Co., being with the latter company at the time of his death. Mr. Koenig was a member of the Technischer Verein of Pittsburg.

ENGINEERING SOCIETIES.

COMING GENERAL MEETINGS.

AMERICAN ECONOMIC ASSOCIATION.
Dec. 27 and 28. Annual meeting at Ithaca, N. Y.
AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.
Dec. 28. At New Haven, Conn. Secy., F. W. Putnam, Salem, Mass.
MICHIGAN ENGINEERING SOCIETY.
Jan. 2, 1900. Annual meeting at Kalamazoo, Mich. Secy., F. Hodgman, Climax, Mich.
AMERICAN ASSOCIATION OF INVENTORS AND MANUFACTURERS.
Jan. 16. Annual meeting at Washington, D. C. Secy., Arthur Stuart, Washington, D. C.
AMERICAN SOCIETY OF CIVIL ENGINEERS.
Jan. 17 and 18. Annual meeting at New York city. Secy., C. W. Hunt, 220 W. 57th St., New York city.
OHIO SOCIETY OF CIVIL ENGINEERS AND SURVEYORS.
Jan. 17 to 19. Annual meeting at Columbus, O. Secy., C. W. Brown, Columbus, O.
AMERICAN SOCIETY OF HEATING AND VETILATING ENGINEERS.
Jan. 23 to 25. Annual meeting at New York city. Secy., W. M. Mackay, P. O. Box 1818, New York city.
LAKE SUPERIOR MINING INSTITUTE.
Feb. 6. Annual meeting at Iron Mountain, Mich. Secy., F. W. Speer, Houghton, Mich.

COMING LOCAL MEETINGS.

ENGINEERS' CLUB OF COLUMBUS.
Dec. 16. Secy., H. M. Gates, 12½ North High St., Columbus, O.
MONTANA SOCIETY OF CIVIL ENGINEERS.
Dec. 16. At Helena. Secy., Albert S. Hovey, Helena, Mont.
ENGINEERS' SOCIETY OF WESTERN PENNSYLVANIA.
Dec. 19. At Pittsburg. Secy., R. A. Fessenden, 410 Penn Ave., Pittsburg, Pa.
WESTERN RAILWAY CLUB.
Dec. 19. At Chicago. Secy., J. W. Taylor, 667 The Rookery, Chicago, Ill.
BOSTON SOCIETY OF CIVIL ENGINEERS.
Dec 20. Secy., S. E. Tinkham, City Hall, Boston, Mass.
ENGINEERS' CLUB OF ST. LOUIS.
Dec. 20. Secy., Richard McCulloch, 2401 N. Spring Ave., St. Louis, Mo.
FRANKLIN INSTITUTE.
Dec. 20. At Philadelphia, Pa. Secy., W. H. Wahl, 15 S. 7th St., Philadelphia, Pa.
NEW YORK RAILROAD CLUB.
Dec. 21. At New York city. Secy., W. W. Wheatley, 168 Montague St., Brooklyn, N. Y.
ENGINEERS' CLUB OF CINCINNATI.
Dec. 24. Secy., J. F. Wilson, P. O. Box 333, Cincinnati, O.
CIVIL ENGINEERS' CLUB OF CLEVELAND.
Dec. 26. Secy., W. H. Searles, Case Library Bldg., Cleveland, O.

AMERICAN SOCIETY OF CIVIL ENGINEERS.—At the regular meeting, Dec. 6, a paper by Mr. James A. Seddon, M. Am. Soc. C. E., entitled "River Hydraulics," was presented. At this meeting Mr. A. C. Savage, M. Am. Soc. C. E., read a paper on "The Present Condition and Prospective Development of Wire Rope Transmission," which was illustrated with lantern slides.

LAKE SUPERIOR MINING INSTITUTE.—The council has accepted the invitation of the mining men of the Menominee Range to hold the next meeting of the institute at Iron Mountain, Mich., beginning Feb. 6. The leading topics suggested for the meeting are: "Improvements in Mining Methods and Equipments," "Reduction of Costs," "Keeping Cost Accounts." The excursions will afford an excellent opportunity to see the principal points of interest on the Menominee Range. The program and details of the meeting will be issued later. F. W. Speer, Secy.

CIVIL ENGINEERS' SOCIETY OF ST. LOUIS.—A regular meeting of the society was held Dec. 4. Mr. A. W. Munster read a paper on "The Temporary Bridge Across the Mississippi River at Wabash St.," which paper he was requested to prepare for publication in the journal of the association.

Capt. A. O. Powell, presented a diagram and explained results obtained with silica cement, which is being used in the construction of the government lock and dam No. 2 at this point. Interesting discussions on timber and cement followed. C. L. Annan, Secy.

THE ENGINEERS' CLUB OF PHILADELPHIA.—A regular meeting of the club will be held on Dec. 16, at which there will be presented a paper on "The Electrical Process of Annealing Armor Plates in the Construction of Warships," by Chas. J. Dougherty.

At the meeting of Dec. 2 a paper on "The Motorman as an Element of Street Railway Economy" was read by Mr. Chas. Hewitt, who exhibited on the blackboard and described a series of results of tests made to determine the effect produced by the motorman's method of operating a trolley car upon the economy of power consumed, which tended to show that by differences in the method of operating the controller, especially in starting the car, a difference of nearly 20 per cent. could be effected in the total power consumption. This subject was discussed by Messrs. Carl Hering, Edgar Marburg, Harry K. Myers, W. C. Furber, A. B. Eddowes and others.

In a paper on "Future Engineering Possibilities," Mr. Thomas G. Janvier and Dr. Henry Leffmann called the attention of the meeting to some prophecies which had appeared in the current press regarding the improvements in certain applications of engineering which would probably occur in the future. L. F. Rondinella, Secy.

ENGINEERS' CLUB OF CINCINNATI.—At the meeting held on Nov. 16, Mr. Alfred Fetry read a paper on "The Evansville Caisson." This caisson was built in 1896, and forms the bottom of the pump pit for the pumping station of the water-works at Evansville, Ind. It is built of white oak, and is circular in plan, with an outside batter, being a frustrum of a cone 16 ft. high, and with its top and bottom diameters 77 ft. 6 ins. and 80 ft. 2 ins., respectively. The roof is 8 ft. thick, leaving a height of 8 ft. for the working chamber. The paper treated of the plan of construction of the caisson and the manner of sinking it to place, which was, for a part of the distance by the use of compressed air, the apparatus for which was described in detail. The caisson supports a stone masonry well, circular in shape, 53 ft. inside diameter, and 61 ft. deep, the wall of which is 12 ft. 3 ins. thick at the bottom, tapering to 4 ft. at a height of 17 ft. from the top, and above that point continues the same thickness to the top. In this well are located the three pumping engines. The paper was illustrated by a large sketch of the caisson, and a number of photographic views at different stages of construction. J. F. Wilson, Secy.

THE AMERICAN ASSOCIATION OF INVENTORS AND MANUFACTURERS.—The annual meeting of this association will be held at Washington, D. C., Jan. 16. Officers will be elected for the coming year, and other important business will be transacted. Among the topics of interest and importance to be brought before the meeting, amendments to Articles I. and III. of the Constitution will be submitted. Article I. now reads: "This organization shall be know as the American Association of Inventors and Manufacturers."

The proposed amendment is as follows: "This organization shall be known as the Inventors' and Manufacturers' Association." Article III. now reads: "Any person in sympathy with the object of the association may become a member on written application approved by one member, or the executive council, upon payment in advance of an annual membership fee of five dollars. The regular annual dues of five dollars shall be paid by members admitted during the first half of any calendar year; those admitted during the second half of any calendar year shall pay two dollars and fifty cents as their dues up to the beginning of the next following year. Upon the payment of one hundred dollars, any person may become a life member exempt from annual dues." The proposed amendment is as follows: In line 1, after the word "person,' 'insert the words "firm or corporation." Arthur Steuart, Secy.

AMERICAN ECONOMIC ASSOCIATION.—The annual meeting of the association will be held at Cornell University, Dec. 27 to 29. President J. C. Schurman of Cornell will deliver an address of welcome, which will be followed by the annual address of the President of the association, Arthur T. Hadley, President of Yale University, whose subject will be "Economic Theory and Political Morality." This will be followed by a discussion by Profs. J. R. Commons, L. M. Keasbey, E. R. A. Seligman and others. The following papers will be read: "Senior's Theory of Monopolies," Prof. Richard T. Ely, University of Wisconsin; "The Place of the Speculator in Distribution," Prof. H. C. Emery, Bowdoin College; "Taxation as a Partial Substitute for Borrowing to Cover Permanent Municipal Improvements," Prof. E. D. Durand, Stanford University; "Financiering of Trusts," Charles S. Fairchild; "The Influence of Trusts in the Development of Undertaking Genius," Prof. Sidney Sherwood, Johns Hopkins University; "Some Tendencies in Recent Combinations which May Become Dangerous," James Brooks Dill; "Railroad Relief and Beneficiary Associations," W. H. Baldwin, Jr., President of the Long Island R. R.; "Railway Charters," Dr. B. H. Meyer, University of Wisconsin; "Difficulties in Adjusting Rates," Martin A. Knapp, Chairman of the Inter-State Commerce Commission; "The Consumers' Label and the Sweat Shop," by John Graham Brooks, and "Plans for the Twelfth Census," by Prof. Walter F. Wilcox, Chief Statistician. These will be followed by the report of the Committee on Colonial Finance, composed of Prof. J. W. Jenks, C. S. Hamlin, Albert Shaw, and Prof. E. R. A. Seligman.

INTERNATIONAL CONGRESS OF MINING AND METALLURGY.—The success which attended the International Congress of Mining and Metallurgy held in 1878 and 1889 justifies the convening of a new Congress to be held in Paris in 1900. This Congress of 1900 will, like that of 1889, be under the direct patronage of the French government. An organization committee was instituted on March 18 by the decision of the General Commissioner of the Exhibition of 1900, and officers have been appointed.

The Congress of Mining and Metallurgy will be opened on Monday, June, 18, and will last for a week. The members of the Congress, who alone will receive all the publications, comprise the following: (1) Delegates of French State departments and of foreign governments; (2) Donors, who have contributed at least $10; (3) Members, who pay the subscription of $4. Reports entrusted to engineers of various countries will be distributed in advance so as to form a basis for discussion at meetings to be held each afternoon and devoted alternately to Metallurgy and to Mining.

Each morning, the members of the Congress, divided up into groups, will have the opportunity of studying in detail, under the guidance of engineers and manufacturers, specially appointed, the most notable mining and metallurgical exhibits of the different countries in the exhibition. In 1878, there were nearly 200 members, and this number rose to above 600 in 1889. It is certain that still larger numbers will attend in 1900 to consider together the improvements realized during that period, and to pave the way to new advances by further studies.

Haton de la Goupilliere,
President of the Organization Committee.

ROADMASTERS' ASSOCIATION OF AMERICA.—The Executive Committee has selected subjects for papers and committee reports as follows, to be presented at the annual meeting at Los Angeles, Cal., in 1900:

(1) Use of Tie Plugs in Hard and Soft Wood Ties; (A) Should the spike be redriven in the plugged hole or in a new part of the tie? (B) Should the plug be of the same wood as the tie? Chairman, T. Hickey, Michigan Central R. R., St. Thomas, Ont.

(2) Should Split Switch Points be Reinforced? (A) How many should the points have? (B) Should the points be higher than the stock rails? (C) Should the points be adjustable? (D) Methods of adjustment. Chairman, H. W. Church, L. S. & M. S. Ry., Englewood, Ill.

(3) The Best Methods of Tamping Ties in Various Kinds of Ballast; (A) Tamping all ties with shovels; (B) Tamping joint ties with picks and all other ties with shovels; (C)

Tamping all ties with picks; (D) Tamping all ties with bars. Chairman, R. P. Collins, N. Y., N. H. & H. R. R., Readville, Mass.

(4) The Best Methods of Handling Different Kinds of Ballast, including loading, unloading, raising track and finishing. Chairman, W. E. Emery, C. & N. W. Ry., West Chicago, Ill.

(5) Improved Track Tools. Chairman, J. A. Prentice, L. S. & M. S. Ry., Toledo, O.

(6) Annual Convention. Chairman, J. C. Rockhold, A. T. & S. F. Ry., Daggett, Cal.

Papers: "Cause of Excessive Flange Wear of Outside Rail to Curves, and What Can be Done to Reduce It," W. H. Brenton, Colorado Midland Ry., Colorado Springs, Colo.; "Reversing Alternate Bolts in Rail Joints," G. W. Merrell, N. & W. R. R., Roanoke, Va.; "Improvements in Permanent Way to Reduce Renewals and Interruptions to Traffic," W. J. Prindle, Pennsylvania Lines, Chicago, Ill.; "Chemical Preservation of Cross Ties," J. M. Meade, A., T. & S. F. Ry., Topeka, Kan. J. B. Dickson, Secy.,

NEW PUBLICATIONS.

LITERARY MAGAZINES.—In the "Fortnightly Review" for November "The Art of Flying" is reviewed by Mr. W. E. Garrett Fisher. He tells us what many of our readers here may not have heard—that a young English inventor, Mr. Percy S. Pilcher, was killed on Sept. 30 last by an accident to one of his artificial wings while he was engaged in flight. The writer reviews the work of Prof. Langley at length, and also refers to the experiments of Mr. Octave Chanute and Mr. Herring in Illinois. He gives credit to some unnamed American for the suggestion that criminals convicted of capital crimes should as an alternative to execution be used for experiments in artificial flight. We quote:

> If both machine and airator go to smash, well and good. The criminal would have had to suffer death anyway and the builder of the machine would feel compensated by the opportunity of testing his device. If the trial succeeded, the gain to the art of flight might be enormous, and the culprit would come down, presumably, frightened enough to choose a life of virtue forever thereafter.

In the same magazine we find an article regarding a proposed railway from India to China. The writer, Mr. Jas. Stuart, is Engineer of the Assam-Bengal Ry., which terminates at Makum, 750 miles from Calcutta. He proposes an extension across the Indian frontier to a point on the head waters of the great Yang Tse Kiang River, and it would follow down the valley of this stream to that part of China now reached by Europeans. The total distance from the present railway terminus to Shanghai by the proposed road may be roughly estimated at 2,500 miles, according to a map accompanying Mr. Stuart's article. The project is as yet in its most embryotic stage, but there seems to be much of promise in it.

Both this magazine and the "Contemporary Review" contain a variety of articles on South African matters, and we commend them to those of our readers who wish to get English views upon the present situation, and what has gone before and is to follow after. In the "Contemporary" we strongly commend to our readers Sir Edward Fry's paper on "Commercial Corruption." Partly as a result of the famous Hooley trial, British public opinion has been stirred to the point of demanding certain reforms in commercial practices, and a bill "to check corruption" was introduced at the last session of Parliament, and will be again introduced at the coming session. The writer of the article, who is also the author of the bill, is Hon. Sir Edward Fry, and his paper is an admirable summing up of certain too-common customs in the business world which this act is designed to aid in suppressing. His discussion is so temperate and reasonable, as to carry conviction to the reader, and a wish that like measures of reform might be brought forward here.

In the "Forum," Prof. E. W. Bemis writes on "The Trust Problem," and discusses various views concerning it which have been recently put before the public. His analysis is an able one, and he winds up with the conclusion that the trust problem will take a generation or more to settle. Prof. Jas. H. Hyslop, of Columbia College, discusses "Responsibility in Municipal Government," and proposes what he calls a "Civil Service Court," which should have power to remove from office municipal officers derelict in their duty. Such a body would exercise powers which are now divided between the Governor, the Civil Service Commission and the courts, and would also undertake work which it is now nobody's business to perform. The plan is worth examination.

The December "North American Review" contains a symposium on the war in South Africa contributed to by a half dozen public men of prominence. Mr. Hugh L. Lusk presents an argument for government ownership of railways in the United States, in which he draws the comparison between American and Australian railway practice, but praises the latter at least as much as it deserves.

In "Appleton's Popular Science Monthly" for December we find a description of "how standard time is obtained." The description relates to the methods pursued by an astronomical observatory, but it will interest surveyors who make star observations with the transit to determine the meridian. There is also an interesting account of the attempts now being made to propagate Atlantic coast oysters in Yaquina Bay, Oregon.

In the "Atlantic" Mr. Henry D. Lloyd writes on "New Zealand," and describes some of the radical experiments in socialistic government which are being carried out there. As the writer says, New Zealand is the "experiment station" of advanced legislation.

The "Review of Reviews" has its usual collection of keen comments on current events. We note also an interesting article on "Porto Rico Under Military Rule," and an account of the proposed new National Park in the Minnesota forests.

The Christmas numbers of the literary magazines naturally are given up to art and fiction, with few articles of the class receiving notice in this column. In "Scribner's," however, we find a paper on Antarctic exploration, by Dr. Frederick A. Cook, of the "Belgica" expedition, which gives an interesting summary of the little knowledge thus far gained of the lands and waters around the Antarctic circle. The writer thinks the South Polar lands are likely to prove the coldest part of the earth, and that explorations in this field promises even more of difficulty and danger than exploration in the Arctic regions. In "Harper's" Sir Martin Conway writes on "Aconcagua and the Volcanic Andes," and tells an interesting story of mountain climbing and adventure. This mountain stands near a pass in the continental watershed which will some day be pierced by a tunnel to give rail communication from Chili to Argentine.

In the December "Cosmopolitan" we find an article on "Great Engineering Projects," by Walter C. Hamm, in which some genuine enterprises are described, together with such chimerical schemes as the Baltic and Black Sea ship canal, the canal from the Bay of Biscay to the Mediterranean, and the Cape to Cairo Ry.

TRADE PUBLICATIONS.

(The standard sizes for pamphlets and trade catalogues recommended by all the principal engineering societies of the United States are: 3½ x 6 ins., 6 x 9 ins., and 9 x 12 ins.)

COMPRESSED AIR.—Globe Manufacturing Co., Battle Creek, Mich. Various leaflets.

This concern makes air receivers, sprayers, nebulizers and small hydraulic air compressors.

RAILWAY MOTORS.—Westinghouse Electric & Mfg. Co., Pittsburg, Pa. Paper; 9 x 6 ins.; pp. 34; illustrated.

This book shows the standard types of Westinghouse railway motors, and tells of present-day practice.

LUBRICATORS.—Lackawanna Lubricator & Mfg. Co., Scranton, Pa. Paper; 6½ x 5½ ins.; pp. 32; illustrated.

This is a catalogue of lubricators and lubricants for engine cylinders and other purposes.

STEAM VALVES.—J. O'Meara, 113 East 27th St., New York city. Paper; 8 x 5½ ins.; pp. 16; illustrated.

Steam valves for radiators and other purposes are described in the above pamphlet. Some of the types are provided with a reversible disc.

DROP FORGINGS.—The Billings & Spencer Co., Hartford, Conn. Paper; 6½ x 10 ins.; pp. 92; illustrated.

This is an illustrated circular and price-list of machinists' tools and drop forgings of every description in copper, bronze, iron and steel.

PUMPS, WELL DRILLERS' AND PLUMBERS' SUPPLIES.—The Barnes Manufacturing Co., Mansfield, O. Cloth; 6 x 9 ins.; pp. 141; illustrated.

This catalogue describes a variety of hand and windmill pumps, well drillers' and plumbers' supplies.

TELEPHONE SUPPLIES.—The North Electric Co., Cleveland, O. Three pamphlets; 6 x 9 ins.; pp. 4; illustrated.

These leaflets describe small telephone switch boards, telephones for farmers' exchanges, and lightning and sneak current arresters.

REFUSE DESTRUCTORS.—Meldrum Bros., Manchester, England, and Alfred Hendriks, 1 Broadway, New York city. Paper; 8 x 13 ins.; illustrated.

The destructors, or garbage furnaces, made by this company are designed to utilize heat for pumping sewage, generating electricity or doing other work.

VALVES AND FIRE HYDRANTS.—Cayuta Wheel & Foundry Co., Sayre, Pa. Paper; 6 x 4 ins.; pp. 51; illustrated.

Besides hydrants and valves, this catalogue describes specials and other gas and water-works appliances, "Quick as Wink" hose couplings and cast-iron chilled wheels.

DEEP-WELL PUMPING MACHINERY.—The Hill Machine Co., Anderson, Ind. Paper; 3 x 6 ins.; pp. 19; illustrated.

Steam pumps and accessories for use in connection with deep wells are described in this catalogue. Separate circulars devoted to water motors, including a deep-well motor, are also issued by this company.

WINDMILLS AND ACCESSORIES.—The Aermotor Co., Chicago, Ill. Paper; 4 x 8 ins.; pp. 42 and 120; illustrated.

One of these pamphlets is a price-list of windmills and accessories and the other is a well-illustrated descriptive catalogue, containing a variety of interesting information on the windmills, or aermotors made by this company.

SEWAGE PURIFICATION.—American Sewage Disposal Co., 89 State St., Boston, Mass. Paper; 7 x 7 ins.; pp. 51; illustrated.

This pamphlet describes a scheme of sewage disposal including settling tanks and filter beds under cover and a second filter bed in the open air. A small, partial installation is in operation for an institution at Brentwood, N. H.

ROLLER BEARINGS.—Hyatt Roller Bearing Co., Harrison, N. J. Paper; 9 x 6 ins.; pp. 34; illustrated.

In this catalogue the Hyatt roller bearing is described and illustrated. This bearing is formed of a coiled spring roller running in a steel case. The roller is formed by winding a flat steel strip on a mandrel. Neither the roller nor the case are hardened.

ELECTRIC APPARATUS.—Wagner Electric Mfg. Co., St. Louis, Mo. Paper, 7 x 10 ins.; pp. 186; illustrated.

This is catalogue No. 101 of the above company. It describes the large line of direct and alternating current machinery manufactured by them, including railway switchboards, D. C. generators and motors, and A. C. transformers, generators and motors. This company has paid special attention to the development of the A. C. single-phase motor and are building machines of this class approaching in efficiency other types of electrical machinery of the same size. Their single-phase motor starts with more than full-load torque and without excessive current.

ELECTRICAL HOUSE SUPPLIES.—Sprague Electric Co., 20 Broad St., New York city. Paper; 7 x 9 ins.; pp. 148; illustrated.

This is catalogue and price-list No. 75 of the above company describing interior conduit of various types including iron-armored, unarmored, brass-armored and flexible conduit. Various fittings, as distributing boxes, switches and cut-outs, are also described.

BELTING.—Shultz Belting Co., St. Louis, Mo. Paper; 5 x 6½ ins.; pp. 72; illustrated.

Leather belting for power transmission is described in this pamphlet. The company named manufactures both plain leather belting and link leather belting. In the latter rawhide pins are used instead of iron pins, and the links are cut with concave edges to fit the pulley. Much information is given concerning the care of belts.

PNEUMATIC TOOLS.—Standard Pneumatic Tool Co., Marquette Bldg., Chicago, Ill. Paper; 9 x 6 ins.; pp. 40; illustrated.

This publication explains the construction and sets forth the merits of the pneumatic tools manufactured by the company named. The list includes drills, hammers, rivetters, etc. All the tools having rotating working parts are driven by small piston engines instead of the small rotary engines and turbines used on other types. As the air is not admitted during the whole stroke the present machines are said to be superior in point of efficiency in the use of air.

MULTIPLE CONTROL SYSTEM.—The Westinghouse Air Brake Co., Pittsburg, Pa. Paper; 9 x 6 ins.; pp. 38; illustrated.

The electro-pneumatic system for controlling railway and other motors recently brought out by the above company is described in this pamphlet. The driver, by means of electric switches, operates magnets on each motor car, which in turn control the valves of air cylinders. The pistons of these cylinders are attached by ratchet and rock-and-pinion gears to the cylinder of an ordinary electric street car controller in such a way that the latter may be operated in the same manner as by hand.

VARIABLE SPEED COUNTERSHAFT.—Reeves Pulley Co., Columbus, Ind. Paper; 9 x 12 ins.; pp. 23; 3½ x 6 ins.; pp. 8; illustrated.

The device described consists of a double pulley on the main shaft and the countershaft, each pulley composed of two cones splined to the shafts. These are operated simultaneously, one pair of cones approaching and the other separating. A stiff belt made of cross pieces of leather and iron runs on the cones, on which its edges bear. As the cones approach or recede the diameter on which the belt runs is varied. This device is used for machine tools, cement kilns, and motor carriages.

MINE VENTILATORS.—M. C. Bullock Mfg. Co., 1165 W. Lake St., Chicago, Ill. Paper, 6 x 9 ins.; pp. 16; tables and illustrations.

This catalogue, numbered 35, describes the fans manufactured by the above company, which are designed for moving large quantities of air at low pressure for such purposes as the ventilation of mines, buildings and drying kilns. This fan and its casing are so shaped that the air is delivered at the final pressure with low velocity, the vanes being spiral instead of radial. The fan and casing are so mounted that they may be easily turned over while the fan is running, thus changing the direction of the current of the air and the action of the fan as exhauster or pressure blower.

ELECTRIC POWER.—La Bella Mill, Water & Power Co., Denver, Colo. Paper; 10 x 8 ins.; illustrated.

By this handsomely illustrated souvenir the La Bella Mill, Water & Power Co. commemorates the starting of its new power plant at Goldfield, Colo. This company supplies power for the mines and electric railways of the Cripple Creek district. Speaking of the permanency of construction of the more important works at that place, the pamphlet says:

> After eight years' development of its gold mining, the district has assumed a magnitude and stability demanding the most modern methods and the greatest perfection of equipment; with this development the old-time tendency to consider gold mining an evanescent industry, liable to flit from one locality to another, has passed away, and the mining of gold in the Cripple Creek district now ranks among the world's great industries.

CONSTRUCTION NEWS.

CONDENSED LIST OF CONTRACTS PENDING WITH DATE OF OPENING BIDS.

Bids to be opened	Work.	Place.	See Eng. News.
Dec. 14.	Water mains, castings, etc.,	New York	Dec. 7
Dec. 14.	Breakwater,	Sheboygan Harbor, Wis.	Nov. 16
	Advertised, Eng. News, Nov. 16 to Dec. 7.		
Dec. 15.	Cut stone,	Washington, D. C.	Nov. 23
	Advertised, Engineering News, Nov. 23.		
Dec. 15.	Sewage disposal plant,	Alliance, O.	Dec. 7
Dec. 16.	Bridges,	Waycross, Ga.	Dec. 7
Dec. 16.	Bridge bonds,	Mansfield, O.	Dec. 7
Dec. 16.	Bridge,	Pine City, Minn.	Dec. 7
Dec. 16.	Lighting,	Milwaukee, Wis.	Nov. 30
	Advertised, Eng. News, Nov. 30 and Dec. 7.		
Dec. 18.	Pipe sewers,	College Station, Tex.	Nov. 30
	Advertised, Engineering News, Nov. 30.		
Dec. 18.	Artesian well,	Toledo, O.	Dec. 7
Dec. 18.	Gas plant franchise,	Covington, Ky.	Dec. 7
Dec. 18.	Electric plant,	London, England.	Dec. 7
Dec. 18.	Water pipe, valves, etc.,	Margate, England	Dec. 7
Dec. 18.	Hospital addition,	New York, N. Y.	Dec. 14
Dec. 18.	Electric lighting,	Elmira, N. Y.	Dec. 14
Dec. 19.	Fire engine and hose,	Jersey City, N. J.	Dec. 14
Dec. 19.	Road bonds ($120,000),	Hartford, Conn.	Dec. 14
Dec. 19.	Altering court house,	Ventura, Cal.	Dec. 7
Dec. 19.	Water tanks, etc.,	Fort Greble, R. I.	Dec. 7
	Advertised, Eng. News, Dec. 7 and 14.		
Dec. 19.	Extending breakwater,	Port Elgin, Ont.	Dec. 7
Dec. 19.	Quays, etc.,	Alexandria, Egypt.	Sept. 14
Dec. 20.	Railway (29 miles),	England.	Nov. 23
Dec. 20.	Prison addition,	Mansfield, O.	Nov. 30

Dec. 20. **Fire hose, New York, N. Y.** .....Dec. 7
Dec. 20. **Steel bridge, Ozark, Ark.**.....Dec. 7
Dec. 20. **Water-works, Kenney, Ill.**.....Dec. 7
Dec. 20. **Pumps, boilers, etc., Birmingham, Eng.**..Dec. 7
Dec. 20. **Additions to water-works, Hamilton, Ont.**..Dec. 14
Dec. 20. **Sewers, New York, N. Y.**.....Dec. 14
Dec. 20. **Bank building, Hampton, Va.**.....Dec. 14
Dec. 21. **Brick sewer, Buffalo, N. Y.**.....Dec. 14
Dec. 21. **Street improvements, New York, N. Y.**....Dec. 14
Dec. 21. **City hall, Topeka, Kan.**.....Dec. 14
Dec. 21. **Extending governm't bldg., Jackson, Miss.**Nov. 30
Dec. 21. **Pipe sewers, Wichita, Kan.**.....Nov. 30
Dec. 21. **Pumping engine, Martins Ferry, Ohio.**....Nov. 30
Dec. 22. **Ditching, Kenton, O.**.....Dec. 14
Dec. 23. **Overhead equipment, Blackburn, England.**Dec. 14
Dec. 23. **Sewer, New York, N. Y.**.....Dec. 14
Dec. 23. **Road, San Juan, Porto Rico**.....Oct. 26
Advertised, Eng. News, Oct. 26 to Dec. 7.
Dec. 23. **Steel wharf, Port Royal, S. C.**.....Nov. 30
Dec. 23. **Electric lighting, Council Bluffs, Ia.**.....Dec. 7
Dec. 24. **Chapel, Danville, Ill.**.....Nov. 30
Dec. 25. **Paving, South Bend, Ind.**.....Dec. 14
Dec. 26. **Boilers, etc., Los Angeles, Cal.**.....Dec. 14
Dec. 26. **Road bonds, West Hoboken, N. J.**.....Nov. 30
Dec. 26. **St. railway franchise, San Diego, Cal.**....Nov. 30
Dec. 26. **Channel work, Oakland Harbor, Cal.**.....Nov. 9
Dec. 27. **Sale of pipe, tanks, etc., Middletown, Pa.**..Dec. 14
Dec. 27. **Electric lighting, Oswego, N. Y.**.....Dec. 14
Advertised, Engineering News, Dec. 14.
Dec. 28. **Constructing sill, New Orleans, La.**.....Nov. 30
Dec. 28. **Hydraulic dredge, New Orleans, La.**.....Nov. 30
Dec. 28. **Electric plant, Gloucester, Eng.**.....Dec. 7
Dec. 29. **Paving, Cincinnati, O.**.....Dec. 7
Dec. 30. **Pier extension, St. Joseph, Mo.**.....Dec. 7
Advertised, Eng. News, Dec. 7 to 28.
Dec. 30. **Bridge, Denver, Colo.**.....Dec. 7
Dec. 30. **Tunnels (2), West Virginia**.....Dec. 7
Advertised, Engineering News, Dec. 7.
Dec. 30. **Canal (9 miles), Ottawa, Ont.**.....Dec. 7
Dec. 30. **Water-works, Elkins, W. Va.**.....Dec. 7
Advertised, Eng. News, Dec. 7 to 21.
Dec. 30. **Aqueduct, Panama, Colombia**.....Oct. 26
Dec. 30. **Water-works, Panama, Colombia**.....Nov. 23
Dec. 30. **Air shaft, Henry, W. Va.**.....Dec. 7
Advertised, Engineering News, Dec. 7.
Dec. 31. **Mistrettra, Italy.**.....Nov. 23
Dec. 31. **Electric lighting, Porto Alegre, Brazil.**....Oct. 26
No date. **Garbage disposal, Waterbury, Conn.**....Nov. 30
Advertised, Eng. News, Nov. 30 and Dec. 7.

RAILWAYS.

ALASKA & NORTHWESTERN.—The Canadian "Gazette" announces the application of this company for a charter to construct a line from Pyramid Harbor north through Chilkoot Pass and by way of the Dalton Trail to Fort Selkirk, on the Yukon River, in the Northwest Territory. The company was incorporated in West Virginia Feb. 2, 1898, with a capital stock of $6,000,000. N. Pierre Humbert, Jr., Boston, Mass., and George Campbell, Philadelphia.

ATLANTIC SHORE LINE.—E. M. Goodall, Pres., Sanford, Me., informs us that the right of way is now being secured for the construction of this proposed railway from Biddeford to York, via Kennebunk, Kennebunkport and Wells, Me., 27 miles, connecting with the Sanford & Cape Porpoise R. R. at Kennebunkport, and with the York Electric R. R., in York. The motive power will be steam. Percy Richardson, Ch. Engr., Portland, Me.

CARROLLTON SHORT LINE.—W. A. McCalla, Tuskaloosa, Ala., is reported to have been awarded the contract for constructing this new line from Carrollton, Ala., to Reform, on the Mobile & Ohio R. R. W. G. Cochrane, Carrollton, is the promoter.

CENTRAL OF WEST VIRGINIA.—Work has been suspended until the spring on this proposed line from Morgantown to Belington, via Reedsville and Independence, W. Va., 65 miles. Surveys have been completed and 10 miles of road have been graded. Geo. C. Sturgiss, Pres., Morgantown, W. Va.; Geo. M. Whitescarver, Vice-Pres.

CHATTANOOGA, AUGUSTA & CHARLESTON.—This company was incorporated in South Carolina Dec. 2, with a capital stock of $25,000 a mile, to build from Charleston, S. C., to connect with the Georgia, Carolina & Northern R. R., at Athens, Ga., about 125 miles. E. R. Williams, Pres., Richmond, Va.; Jas. U. Jackson, Vice-Pres. and Gen. Mgr., Augusta, Ga.

CHICAGO & ERIE.—Robert P. Woods, Cy. Engr., of Wabash, Ind., informs us that local capitalists are seriously contemplating the construction of a railway extension from Wabash to Laketon, Ind., 10 miles, to connect with the Chicago & Erie Ry. The manufacturers and merchants of this district are seeking better connections with Chicago.

CHICAGO, PUDUCAH & SOUTHEASTERN.—The council of Metropolis, Ill., has granted this company the right of way through Metropolis upon the condition that work be completed within 18 months. The proposed route is from Wickliffe to Birmingham, Ill. Dixon S. Carter, Champaign, Ill., is the promoter.

CHICAGO, ROCK ISLAND & PACIFIC.—Construction is about to begin, according to reports, on extensions of this system from Kingfisher to Guthrie, Okla., 30 miles, and from Chickasha to McAlester, Ind. Ter., 125 miles. Surveys are also nearing completion.

CLEVELAND, OHIO CENTRAL & CINCINNATI.—This company was incorporated in Ohio, Dec. 5, with a capital stock of $10,000, to construct a railway to be operated by steam, electricity or other motive power, between Cleveland and Cincinnati, via West Salem, O. F. G. McAuey.

CUMBERLAND COAL & COKE.—Reports from Crossville, Tenn., state that this company will commence the construction of a railway from the Tennessee Central R. R. at Piney Creek, Tenn., to its coal fields on Crab Orchard Mountain, as soon as surveys have been completed.

DANVILLE, PAXTON & NORTHERN.—This company was incorporated in Illinois Dec. 2, with a capital stock of $100,000, to construct a line from Danville to Paxton, Ill. The work of surveying the route and of securing the right of way will soon be undertaken. W. P. Cannon and G. T. Buckingham, of Danville, and Charles Bogardus.

DULUTH, GLENCOE & SOUTHWESTERN.—The reorganization of this company, incorporated in 1886, is being contemplated for the purpose of constructing a line from St. Cloud to Mankato, via Fair Haven, Delano and Glencoe. Surveys will probably be made early in the spring. A. H. Reed, Pres., Glencoe, Minn.; L. P. Hunt.

GREAT NORTHERN.—Grant Smith & Co., Chicago, Ill., have been awarded the contract for grading an extension of this system west of Spokane, Wash., requiring several heavy cuts. The right of way is now being cleared. H. W. Edwards, Resident Engr., Spokane.

GULF & SHIP ISLAND.—C. D. Smith & Co., Birmingham, Ala., are stated to have received the contract for constructing 44 miles of new main line for this company, between Jackson and Hattiesburg, Miss., work to be completed by April 1. Further official information was published last week. S. S. Bullis, Gen. Mgr., Gulfport, Miss.

HOUSTON, BRAZOS & NORTHERN.—John N. Maxey, Ch. Engr., Houston, Tex., writes us that the right of way to Sealey, 53 miles, has been obtained, the capital secured, and that the contract for the first 20 miles will be let early in January. The line will be 400 miles long, extending from Houston, Tex., to Tishomingo, Ind. Ter.

KANSAS & SOUTHWESTERN.—This company, which is capitalized at $1,000,000, has filed its charter in Oklahoma. The proposed route is from a point where the Arkansas River crosses the north line of Oklahoma, to a point on the Missouri, Kansas & Texas Ry., in the Creek Nation, crossing the St. Louis, & San Francisco Ry. near Dawson Station. E. H. Brown, Girard, Kan., and C. H. Kimball, Parsons, Kan., are directors.

KLIPKNOCKIE.—This company was incorporated in New York Dec. 6, with a capital stock of $100,000, to construct a standard-gage steam railway from the Pittsburg, Shawmut & Northern Ry. at Birdsall, Allegheny county, N. Y., to Klipknockie quarry, at Almond, a distance of 7 miles. Frederick Mollenhauer and Geo. B. Shepherd, of New York, are directors.

LICKING RIVER.—This company has been incorporated with a capital stock of $50,000, to acquire and operate a line of railway from Midland on the Chesapeake & Ohio Ry. to West Liberty, Ky., 40 miles. This company succeeds the Licking Valley Ry. Co. C. H. Eaton, Gen. Mgr., Salt Lick, Ky.

LOUISVILLE & NASHVILLE.—Contracts will soon be let, according to reports, for the construction of a branch road from Reed's Gap, 23 miles north of Birmingham, Ala., southwesterly through the Warrior coal fields, 30 miles, with a proposed extension to the Warrior River, 30 miles further.

MEXICO.—It is reported that capital in Mexico City is about secured for a road about 450 miles long, to connect the Mexican Southern, the National and the International railways, all of Mexico City, with the cities in Tobasco, Yucatan, Chipas and Campache. Estimated cost, about $14,000,000.

MEXICO.—Reports state that Emilio Pardo, a lawyer, has obtained a concession from the government for a line from Misa de la Nicaxa, Puebla, to San Antonio Atlehuitza, Hidalgo. The terms under which the concession was granted require that Mr. Pardo shall begin the survey for the line within six months, and that 10 kilometers of track must be laid within 18 months. Thereafter there must be constructed not less than 15 kilometers each year. The road shall be completed and in operation within five years. The concessionaire must contribnte, commencing immediately, $125 monthly for inspection of the line. A deposit of $6,500 in bonds of the consolidated debt has been made by Mr. Pardo.

NEBRASKA & GULF.—Reports from Hastings, Neb., state that this company has been incorporated by capitalists from Hastings to build from a point in Knox county, Neb., on the Missouri River, opposite Running Water, S. Dak., south to the Kansas line. Surveys have been commenced at Edgar.

NORTH ARKANSAS & WESTERN.—The state board of railroad incorporation of Arkansas has approved of this company's charter, capitalized at $1,300,000. The road is now being built west from Fayetteville by the Arkansas Construction Co., which is employing a force of 60 convicts. John M. Pittman, Pres., Prescott, Ark.; W. A. Bright, Little Rock, Ark.

NORTHERN PACIFIC.—Reports state that the Clearwater Short Line branch of this railway has been completed between Potlatch and Oro Fino, Idaho, and that grading has been finished and track-laying commenced on that section from Oro Fino to the junction of the middle and south forks of the Clearwater River, 33 miles distant. It is estimated that track-laying will be finished by Jan. 5. In the first 10 miles there are three bridges and trestles at Jim Ford Creek, Big Canyon and at Lolo Creek. For the next 10 miles there will not be even a culvert. The last 13 miles has numerous bridges. The Kamiah Bridge, will have two spans of 155 ft. each, and a draw 200 ft. wide. This will be the bridge across the middle fork of the Clearwater. At Lawyer's Canyon, there is a 6-bent bridge. At all the large bridges the construction trains will pass on falsework. A "shoo fly" has been built around the Oro Fino tunnel that has a curvature of 24°. E. H. McHenry, Ch. Engr., St. Paul, Minn.

PERU.—Ernest Thorndike, Civil Engr.; B. Thorndike or John L. Thorndike, latter M. Am. Soc. C. E., each one of Lima, Peru, is reported to have completed plans for the Oroya & Cerro de Pasco Ry., and is now endeavoring to enlist capital for the construction of the line, which will be about 60 miles long.

ROUMANIA.—The Minister of Public Works, Bucharest, is reported to have approved plans for three lines of new state railway to cost about $17,000,000. Gen. S. Falcoyano, Pres. Council of Administration, Bucharest.

RUSSIA.—U. S. Vice-Consul J. C. Monaghan, Chemnitz, Germany, reports that Russia has sent engineers to the left bank of the Ural River to survey the country lying between Orenburg and Taschkent. The government intends to build a railway to connect these two cities. This line will cross Turkestan. Another line is to run from Alexandrowo through the Transcaspian country along the left bank of the Amoo as far as Tschardschin

ST. LOUIS, TECUMSEH & LEXINGTON.—S. J. Scott, Pres., Tecumseh, Okla., informs us that complete profile maps, note book, etc., have been made for this projected line from Stroud to Lexington, via Bellemont and Tecumseh, Okla., 72.4 miles. The capital for construction has not yet been secured. The engineers estimate the cost of constructing the road ready for the iron and ties, at $6,000 a mile; may be done for less. A. L. Phillips, Engr.

SACRAMENTO & SAN JOAQUIN VALLEY.—This company has been incorporated with a capital stock of $500,000, to build a line from Sacramento to Stockton, via New Hope, Cal., with a branch from Franklin to the Sacramento River. John Cross and Arthur Newton, of Los Angeles, Arthur Thornton, New Hope, Cal., are directors.

SALEM & SOUTHERN.—Reports state that this company has been incorporated in Missouri with $1,000,000 capital stock to build from Salem, Mo., south to Texas, about 100 miles. R. J. Greathouse, West Plains, Mo.

TENNESSEE & ALABAMA MINERAL.—This company has applied for a charter to construct and operate a line from the Nashville, Florence & Sheffield Ry., about two miles south of Lawrenceburg, southerly to a point in Alabama, near Tuscumbia, on the Southern Ry., a distance of 7 miles. J. Craig McLanahan, Chas. G. Roberts and Wm. L. Granbery are incorporators.

TIFTON, THOMASVILLE & GULF.—Grading has been completed between Tifton and Moultrie, Ga., on this proposed line from Tifton to Thomasville, via Moultrie, 56 miles, and tracklaying on this first section will soon be completed. The Union Lumber Co., which will have two mills near Moultrie is interested. H. M. Atkinson, Pres., Atlanta, Ga.; S. Z. Ruff, Ch. Engr., Tifton, Ga.

TOMBIGBEE & NORTHWESTERN.—This company has filed a declaration for incorporation in Alabama, with a capital stock of $50,000, to construct a line from Nannahubba Bluff on the Tombigbee River to Healing Spring, Ala., about 50 miles. E. L. Russell, Pres.; Henry Tacon, Treas., both of Mobile & Ohio R. R., Mobile, Ala.

WAYCROSS AIR LINE.—Clearing and grading is said to be under way on the extension of this line from Douglas northwest to Fitzgerald, Ga. No contracts have been let. There will be no important bridge work, but about 60,000 yds. of excavation and embankment will have to be accomplished.

STREET AND ELECTRIC RAILWAYS.

SKOWHEGAN, ME.—The proposed route of the Franklin, Somerset & Kennebec Ry. from New Sharon to the Somerset county line, as surveyed by Leonard S. Keith, has been approved by the Franklin county commissioners.

BOSTON, MASS.—The Stoughton & Randolph Co. has asked the railroad commissioners for permission to extend into Sharon and Holbrook.——The commissioners have also received a petition from the Worcester & Boston St. Ry. Co. for an increase of capital stock from $700,000 to $850,000, and for the issuance of $850,000 in bonds for the purchase of property necessary for the operation of the road.

ALBANY, N. Y.—The Warren County R. R. Co. has petitioned for a franchise for an electric road from Lake George to Warrensburg, a distance of 6 miles.

BINGHAMTON, N. Y.—Local papers state that the Binghamton-New York St. R. R. proposes to extend its line to Hallstead, Pa., and eventually to Susquehanna.

LONG ISLAND CITY, N. Y.—President Baldwin, of the Long Island R. R., states that the work on the proposed Atlantic Ave. tunnel will be begun as soon as the franchise is granted, and when completed the company will commence equipping the line within the city with electricity. About 30 miles of road will be equipped, running to the beaches, along Atlantic Ave. and in the tunnel.

NEW YORK, N. Y.—The combination of the Third Ave. Ry. Co. and the Metropolitan St. Ry. Co. has been granted a franchise for extending the line for a distance of 16 miles, running from 128th St. and Broadway to the Yonkers line.

ROCHESTER, N. Y.—Local papers state that the Bay R. R. will be reorganized under the name of the Rochester & Suburban Ry., and that General Manager T. J. Nicholl will purchase 12 electric cars for the new line.

ROCKVILLE CENTER (L. I.), N. Y.—The Nassau Belt Line Traction Co. was granted a franchise Dec. 5 by the village trustees for an electric line to extend on about two miles of the streets in this village, for a period of 199 years. The company proposes to connect Mineola and Long Beach, a distance of 30 miles, connecting Hempstead, Garden City, Greenwich Point, Freeport, Baldwins, Ocean Side, East Rockaway and Lynbrook. Paul K. Ames, Pres.

BRIDGETON, N. J.—The contract for erecting the building for the new power plant of the American Ry. Co. has been let to Contractor Kerr, Eddystone, Pa., at about $100,000. Boilers have been purchased.

DOYLESTOWN, PA.—It is reported that the Union Traction Co., Philadelphia, will build another track from Doylestown to Philadelphia, and a new bridge will be erected over the Neshaming, at Edison.

GREENBURG, PA.—The Connellsville, New Haven & Leisenring St. Ry. Co.'s line has been purchased by M. K. Salisbury, W. H. Graham and others for $123,000. The purchasers are interested in the Mt. Pleasant, Scottdale & Connellsville St. Ry. Co., which is building a line from Mt. Pleasant to Scottdale, and it is proposed to build at once the branch surveyed to Vanderbilt, five miles long. The lines, when connected, will be 30 miles in length. A line from Mt. Pleasant to Greensburg, and connections with those of the Youghiogheny and Monongahela Valley is also proposed.

LATROBE, PA.—A company has been formed, according to reports, with $45,000 capital stock, by James H. Peters, John B. Anderson, Dr. J. W. Hughes and others, to construct an electric railway, 8 miles long, from this place to Youngstown, Baggaley, Whitney and Lippincott.

WEST CHESTER, PA.—A. B. Roecker, Secy. West Chester & Downington St. Ry. Co., writes us that the capital has been secured and half of the right of way obtained. The surveys have been completed and the contracts will be let as soon as the full right of way is secured. The road will be about 8 miles long.

RICHMOND, VA.—The Richmond Passenger & Power Co. has asked for a franchise in this city.

WHEELING, W. VA.—A project to construct an electric railway from Wheeling to Wellsburg is being agitated by J. A. Miller and Alfred Paull.——Surveys are being made along the Cadiz Pike for an electric line between Bridgeport and Cadiz.——The extension of the Wheeling & Elm Grove system to Triadelphia is said to be considered.

CHATTANOOGA, TENN.—The Chattanooga Rapid Transit Co. proposes making an extension to its line to St. Elmo, and to Chickamauga Park, 10 miles from this city. The work will be started at once. Clarence P. King, Philadelphia, is interested.

JEFFERSONVILLE, KY.—The Jefferson Suburban Line, composed of C. W. McGuire, New Albany; Ward H. Watson, Charlestown; M. Z. Stannard and others, of Jeffersonville, has asked the council for a franchise through this city, with intentions of extending the line to New Albany.

LOUISVILLE, KY.—The Louisville St. Ry. Co. proposes, it is said, to issue $1,000,000 in bonds, in yearly instalments of $200,000 each, for improving and extending its service. The purchase of new vestibuled cars and the extension to Crescent Hill will be included in the improvements.——The promoters of the proposed Louisville, Mt. Washington & Fairfield Electric R. R. are negotiating for an entrance to Louisville from Fairfield, which will be about 36 miles long.

BELLAIRE, O.—Local papers report the purchase of the Benwood Electric St. Car line on Nov. 28, by the Wheeling St. Car Co. for $175,000.

CINCINNATI, O.—The county commissioners have granted a 25-year franchise to the Cincinanti, Lawrenceburg & Aurora Electric St. R. R. Co. to operate a line from Cleves to Harrison, by way of Valley Junction and Cilley's Corner. The company will pay $3,500 toward the construction of an iron bridge over Dry Fork Creek.

CLEVELAND, O.—The ordinance to establish a street railway route in the east part of this city has been approved by the board of control, and if passed by the council the franchise will be advertised for bids, according to reports.

COLUMBUS, O.—The Mill Creek Valley Electric Ry. Co. has received a franchise, through General Manager Wayenhels, for an electric line from this city to Lancaster, about 25 miles in length. The construction of the road, which will cost about $600,000, will be started on Jan. 1. Judges Dwyer and O. B. Brown, Detroit, are interested.——J. T. Adams, Toledo, representing a syndicate, has submitted a proposition to the council offering to buy all street railway franchises in this city for a period of 25 years.

TOLEDO, O.—Riggs & Sherman, Ch. Engrs., Toledo & Monroe Electric R. R., write us that surveys are nearly completed, and two-thirds of the right of way for the proposed route to Monroe Beach, 25¼ miles, has been obtained. Contracts for material will be let in December and January, and the contract for construction will be let next spring. Jas. A. Huston, Pres.——The Tremont & Norwalk Ry. has 35 miles under construction, of which 20 miles of track laid. Riggs & Sherman, Engrs.

STEUBENVILLE, O.—Geo. A. Maxwell writes us that no company has been formed to operate the electric rail-

way from Steubenville to Empire, a distance of 14 miles, and that he is the only one interested in the project so far.

URBANA, O.—Local papers state that the surveys of the Urbana branch of the Dayton, Springfield & Urbana Electric line has been started by Cary Pratt, and that the construction will be started at once by a force of 50 men and several teams.

WARREN, O.—The construction of electric railways connecting Ashtabula, Jefferson and Warren, Burton, Andover and Meadville, Pa., all to join a line to Cleveland, it is said, is being considered by a Philadelphia syndicate, which is represented by G. E. Stern and T. D. Elkington.

YOUNGSTOWN, O.—The county commissioners on Dec. 4 granted a franchise to A. A. Anderson and John E. McVey to construct an electric railway from Struthers to Lowellville, which will be an extension of Mahoning Valley Electric Ry. from Warren via Youngstown and Struthers. It is proposed to connect with New Castle.

ELKHART, IND.—The Indiana Ry. Co., which owns the interurban electric line connecting South Bend, Mishawaka, Elkhart and Goshen, and the city lines at each place, proposes to double the capacity of power plants at midway stations, Osceola and Dunlap, and to build a new plant at South Bend early in the spring. The extension of its line to Laporte and Michigan City is also proposed.

INDIANAPOLIS, IND.—Daniel Leslie and A. W. Moore, Indianapolis, have been granted a franchise to construct and operate an electric railway from Columbus, via Brownstown, to Salem for a period of 50 years. The road will be known as the Columbus, Brownstown & Salem Electric R. R., and will be completed by Sept. 1, 1903.

GRAND HAVEN, MICH.—John Winter, Pres. Detroit & Ann Arbor Electric Ry., Detroit, and others, have asked the council for a franchise to enter this city with an electric road proposed to run from Grand Rapids.

HOUGHTON, MICH.—The Houghton County St. Ry. has petitioned the village council for a franchise in this town up to the Quincy Mine. The work will be started by July 1, if the franchise is granted.

CHICAGO, ILL.—The council on Dec. 4 granted a franchise to the Chicago City Ry. Co. for an extension of its line on Archer St. for 1½ miles.

MILWAUKEE, WIS.—The Transportation Co. is said to have asked for a franchise for a period of 35 years.

ST. PAUL, MINN.—Local papers state that a syndicate, headed by M. J. Mandelbaum & Co., F. D. Pomeroy, D. H. Kimberley and others, of Cleveland, O., will ask the council for a franchise to build and operate an elevated road between this city and Minneapolis.

COUNCIL BLUFFS, IA.—General Manager Dimick, Omaha & Council Bluffs Ry. & Bridge Co., has announced officially that the company will extend its lines to Lake Manawa at once.——The Lake Manawa & Manhattan Beach R. R. Co. has been incorporated, with $500,000 capital stock, by J. H. Millard, Guy C. Barton, Omaha.

KANSAS CITY, MO.—The county court has been asked by Albert E. Holmes, A. H. Green, F. P. Swan and others for a franchise for an electric railway from Kansas City to Warrensburg.

AUSTIN, TEX.—The West Side Electric St. Ry. Co., San Antonio, has been incorporated, with $75,000 capital stock, by C. H. Beauchamp, Jr., R. C. Hawley, W. C. Berry and others.

SPOKANE, WASH.—It is reported that ex-Senator Warner Miller, New York, and James F. McNaught, Seattle, have taken an option on the water power at Kettle Falls, on the Columbia, north of Spokane, and are considering the question of constructing an electric road from Spokane Falls and Northern R. R. to Republic Camp.

FORT ERIE, ONT.—The Fort Erie Electric Ry. Co. has received permission from the Niagara Falls Park (Canadian) Commission to extend its line from Fort Erie to Slaters Point, about two miles from Chippewa. Work will be started next season.

DAWSON CITY, ALASKA.—Press reports state that the electric street railway that is being constructed in this city will be extended to Klondike City, and probably to Fort Bonanza and Eldorado, on the Bonanza River. The syndicate which owns the road will petition Parliament for the franchise.

HONOLULU, H. I.—Reports state that Thos. L. Johnson and Albert Johnson, of Cleveland and Lorain, O., are arranging for the construction of the proposed electric roads in this city and on the Island of Oahu. The syndicate will also operate ferryboats between the various islands. The Johnson Co., Lorain, has the contract for the rails, etc. Work will begin about Feb. 1. Frank Haines, Ch. Engr., Elyria, O.

HONOLULU, H. I.—Reports state that the Kohala & Hilo Ry. Co. will let contracts soon for its electric road, which is to cost about $2,300,000 and is to be about 130 miles long. L. D. Boencister, 27 Pine St., New York, N. Y., the attorney for the company, may be addressed.

SAO PAULO, BRAZIL.—Reports state that F. S. Pearson, Cable Bldg., Houston St. and Broadway, New York city, Ch. Engr. Sao Paulo Electric Light & Power Co., will let further contracts this month for equipment, to cost about $500,000.

BLACKBURN, ENG.—Bids are asked until Dec. 23 for overhead line equipment. Lacey, Clirehugh & Sillar, Engrs., 2 Queen Anne's-gate, Westminster, London; R. E. Fox, Clk.

LANCASTER, ENGLAND.—Reports state that the South Lancashire Tramways Co. is interested in a proposed electric railway from St. Helens to Manchester, a distance of about 80 miles.

NEWCASTLE-UPON-TYNE, ENG.—Bids are asked until Jan. 16 for a 2,000-HP. generator for the tramways. Chas. Hopkinson, Engr., 29 Princess St., Manchester, or 26 Victoria St., London.

GREENOCK, SCOTLAND.—The city officials are reported as wanting bids for leasing the tramway. Colin MacCullock, Town Clk.; S. E. Fadden, Elec. Engr.

CALAIS, FRANCE.—U. S. Consul Miller, Calais, reports that a company has been organized in Paris to build an electric road here.

BERLIN, GERMANY.—It is stated that the Prussian Minister of Public Works proposes to operate the elevated roads in this city by electricity. New cars, larger than the present ones, will be used. The city road carried about 60,000,000 people last year, and the belt line about 34,000,000.

COLOGNE, GERMANY.—It is reported that the Kolnische Strassenbahn Gesellschaft has arranged with the city commission for the lease, beginning Jan. 1, of the street railways. The lines will be extended and equipped with electricity. H. Geron, Dir.

MANNHEIM, GERMANY.—Bids, it is stated, will be asked at once by the municipal council for building an electric road. Otto Lowit, Mgr. and Engr. Basler Strassenbahnen, Basel, Switzerland, will have charge of the work.

ALEXANDRIA, EGYPT.—Press reports state that M. Montagne, of the Enterprise & Electra Co., Paris, France, and Brussels, Belgium, and M. Cahen, of the Alexandrian Tramway Co., are in Cleveland, O., where, it is said, they will spend about $1,000,000 for rolling stock for a road in this city and in France.

COPENHAGEN, DENMARK.—The two tramway companies, the De Kjobenhavnske, President Larsen, and the Fredricksbergs, President Heide, are considering the question of operating the lines by electricity, according to report. The two lines have a length of about 25 miles.

TENERIFFE, CANARY ISLANDS.—It is stated that the Electric Tramway Co., of Teneriffe, has been formed in Brussels, Belgium, to build a line in this city.

ELECTRIC LIGHT AND POWER.

PORTLAND, ME.—The question of having the electric wires put in conduits is being considered. L. L. Cummings, Cy. Elect.

SACO, ME.—The plant of the York Light & Heat Co. was destroyed by an explosion Dec. 6; reported loss, $12,000.

PROVIDENCE, R. I.—Mayor Baker is urging the city to consider the question of a municipal plant. The mayor has vetoed the lighting contract ordinance, authorizing an expenditure of $260,000.

WALLINGFORD, CONN.—The borough has appropriated $5,500 for a plant, according to reports.

BUFFALO, N. Y.—Henry Rustin, Bureau of Electricity and Machinery Pan-American Exposition Co., writes us that the company will not let the contract for installing the electric plant.

ELMIRA, N. Y.—Bids are asked until Dec. 18 for lighting this city for five years from Jan. 11 with 300 incandescent lights, etc. M. H. Murphy, Cy. Clk.; Edgar Denton, Mayor.

JAMESTOWN, N. Y.—The question of selling the city plant to a private company is being considered. S. W. Thompson, Chn. Com.

NEW YORK, N. Y.—Bids are asked until Dec. 22 for lighting the parks, streets, alleys, public buildings, etc., with gas or electricity for one year. H. S. Kearney, Comr.

OSWEGO, N. Y.—Bids are asked until Dec. 27 for electric lighting of the streets, public buildings, etc., as stated ig our advertising columns. E. A. Cooke, Clk.

SENECA FALLS, N. Y.—New bids will be asked at once for city lighting for five years. Address Trustee Rumsey.

SCHOHARIE, N. Y.—W. C. Johnson, Ch. Engr., Niagara Falls, N. Y., writes us that the Empire State Power Co., Amsterdam, N. Y., is asking for bids for about 25 miles of transmission wire, water wheels, etc., for its plant now being built. McDonough & Cunningham, Troy, N. Y., have the contract for the dam and power house at Station No. 3, Schoharie Falls, and McCagbey & Linehan, Sandy Hill, N. Y., that for the canal. The Stanley Electric Mfg. Co., Pittsfield, Mass., has the contract for the electric machinery. Surveys are about completed for two other power stations, one at Bentonville and the other about two miles below. Surveys are also being made on the upper part of the Schoharie River and its tributaries with a view to locating dams. Capital stock, $1,000,000. J. Geo. Kaelber, Pres. and Gen. Mgr., Rochester, N. Y.

YONKERS, N. Y.—Mayor Sutherland is urging the construction of a municipal plant. M. J. Walsh, Pres.

ASBURY PARK, N. J.—The question of a city plant is reported as being considered.

EAST ORANGE, N. J.—G. S. Hulbert, Pres. Bd. Education, has recommended that bids be asked at once for a plant.

CONSHOHOCKEN, PA.—M. J. O'Brien, Pres. Council, writes us that a committee has been appointed to consider the question of a plant.

EASTON, PA.—The department of water and light has been directed to advertise for bids for lighting the city.

ELLWOOD CITY, PA.—Alex. Main, Borough Engr., writes us that the bids, recently received, have been referred to the committee. The successful bidder was to receive a franchise for 15 years.

McKEESPORT, PA.—A. B. O'Neil, of the select council, writes us that it is proposed to build a plant in the near future.

NEW WILMINGTON, PA.—W. J. Shields is reported to have about completed plans for the $5,000 plant. G. H. Getty, Pres. Council.

SEBRING, PA.—A. E. Albright writes us that nothing has yet been done regarding a plant and water-works.

WEISSPORT, PA.—The electric plant and other property of the Carbon County Improvement Co. were destroyed by fire Dec. 6; reported loss, about $100,000.

HANCOCK, MD.—Robt. Bridges and Peter E. Dawson are reported as interested in a company to build a plant and water-works.

RICHMOND, VA.—Reports state that the James River Construction Co. is about to erect a steam power house for the electric railway. The construction and equipment of the power house will cost about $135,000. The Riter-Conley Mfg. Co., Pittsburg, has secured a contract for the steel roof trusses.

ATLANTA, GA.—J. W. English writes us that it is understood that the Atlantic St. Ry. & Power Co. proposes to erect a new plant near the center of the city. Ernest Woodruff, Pres.

ROME, GA.—The City Electric Ry. Co., which recently purchased the plant of the Rome Lighting Co., will at once make improvements to the property, some of the contracts having been let. D. J. Kerr, Elec. Engr.

ELBA, ALA.—J. F. Saunders, Mayor, writes us that the electric company has not completed arrangements for a plant.

PRATTVILLE, ALA.—The question of electric lighting, it is stated, is being considered.

STARKVILLE, MISS.—F. L. Weir, Mayor, writes us that the town does not propose to put in a plant, but may grant a franchise. No company has yet been organized.

TUPELO, MISS.—Bids are asked by the city clerk until Dec. 15 for a plant to cost $15,000, according to reports.

JOHNSON CITY, TENN.—It is stated that the Watauga Light & Power Co. will let a contract at once for the plant, to cost about $25,000.

CHARLESTOWN, IND.—C. R. Hay writes us that the question of building a plant will not be considered until spring.

MORRIS, IND.—W. L. Wright, Editor of the "Clipper," writes us that E. Bennett & Sons have purchased the plant and are extending the wires. It is understood that another boiler-room is required.

BEAVER DAM, WIS.—T. D. Lawrence is reorted to have been granted a franchise. The present plant will be bought and extended.

DAVENPORT, IA.—The people have voted in favor of granting a franchise to the People's Light Co. It is stated that work on a plant to cost about $200,000 must be begun by Jan. 1, and that 12 miles of conduit must be laid in 2½ years.

ELKADER, IA.—Schmidt Bros. & Co., it is stated, propose to put in a plant.

MUSCATINE, IA.—O'Keefe & Orbison, Appleton, Wis., have completed plans and a report for a power plant, canal, etc., on the Cedar River, which is to develop about 9,000 HP.

VERNDALE, MINN.—A. D. Fulton, Mayor, writes us that A. B. Kerlin, of Freeport, Ill., is considering the matter of putting in a plant.

ALLIANCE, NEB.—A. Minnick, Pres. O'Neill Electric Light Co., O'Neill, Neb., is reported to have applied for a franchise here.

DICKINSON, N. DAK.—Oliver Whaley, Secy. Dickinson Electric Light & Power Co., writes us that estimates for the plant, to cost about $9,000, are being made. It is proposed to install two 100-HP. boilers, a 150-HP. compound engine, grates adapted to liquid coal, two dynamos, etc. Six feeder lines, longest about 2,500 ft.

PARK RIVER, N. DAK.—Geo. K. McEwan and J. J. Dougherty have been granted a franchise for a plant to be in operation by July 1.

INDEPENDENCE, MO.—The question of building a plant is being considered by the city. Address Mayor Woodson and Councilman White.

KANSAS CITY, MO.—The question of a municipal plant is being considered. The Home Electric Co. and several others have applied for franchises. Address Alderman Jewell.

ST. LOUIS, MO.—A. J. O'Reilly, Supervisor City Lighting, writes us that the city is not contemplating building a plant, as has been reported. The city proposes to let two contracts for street and alley lighting, gas or Welsbach and electric; estimated cost, about $400,000 a year.

WEBB CITY, MO.—Carter & Hendrickson have been granted a franchise for a plant.

EUREKA SPRINGS, ARK.—Wm. Duncan, of the Citizens' Electric Co., writes us that everything for this plant is secured except a 160-HP. engine and a 100-K-W. street railway generator.

BUTTE, MONT.—Carlisle Mason, Min. Engr., 48 East Broadway, Butte, writes us that nothing will be done for several months with regard to the proposed plants at Melrose, Tampa, etc. The statement that $5,000,000 has been subscribed for the work is not true, although parties are ready to subscribe when the scheme is laid out in proper shape for their consideration.

HELENA, MONT.—Bids are acked until Jan. 2 for furnishing a 125-HP. engine and boiler, a 110-arc light dynamo, 85 1,200-c. p. lamps, 20 miles of wire, 570 poles, 400 arms, etc. Edward Horsky, Cy. Clk.

SPOKANE, WASH.—Geo. A. Sonneman and Jay Lawyer, of Spokane, who are reported as wanting to purchase the Port Falls, propose to construct a plant to furnish power to new mills, a smelter and other buildings that are proposed for Rathdrum, etc.

ALAMEDA, CAL.—Bids are asked until Dec. 18 for changing the gearing, etc., in the plant. B. F. Lamborn, Cy. Clk.

HOLLYWOOD, CAL.—The question of putting in a plant is reported as being considered.

RIVERSIDE, CAL.—E. F. Kingman, Chn. Bd. Trustees, writes us that the city will vote on the question of issuing $35,000 in bonds for a plant.

UKIAH, CAL.—It is stated that Robt. Effey, of Santa Cruz, Cal., has purchased $18,400 of bonds for the proposed plant, and that bids for the construction will soon be asked.

LEWISTON, IDAHO.—E. H. Libby, Lewiston, writes us that the contract for the electrical equipment for the Lewiston-Charleston Electric Co.'s plant has been let to the Westinghouse Electric & Mfg. Co., Pittsburg, Pa. The capital for the construction will probably be secured in January. The plant will furnish 1,500 HP., of which 500 HP. will first be installed for street railway, electric lighting and flour mills. W. E. Moore, Ch. Engr., Charleston, Wash.

WINDSOR MILLS, QUE.—This place, which voted Dec. 2 to issue $25,000 in bonds for water-works, is also considering the question of an electric plant.

ATHENS, ONT.—The question of a plant is reported as being considered.

CAMPBELLFORD, ONT.—This place is said to have voted $7,000 in bonds for a plant.

OTTAWA, ONT.—The question of a municipal plant will not be submitted to the voters. Franchises have been granted to the Metropolitan Electric Light Co. and the Deschenes Electric Co.

BRIDGES.

SPRINGFIELD, MASS.—Chas. M. Slocum, Cy. Engr., writes us that plans have been prepared for a bridge, but no contracts have been let.

NEW YORK, N. Y.—Mayor Van Wyck has signed the resolution of the Municipal Assembly authorizing an issue of $4,000,000 in bonds for the construction of the new East River bridge between Delancey St., Manhattan, and Williamsburg. The board of estimate and apportionment has authorized the issue of $1,000,000 in bonds for preliminary work.——The only bid received by the New East River Bridge Commission on Dec. 7 for furnishing steel cables, suspenders, etc., for the new East River bridge was submitted by John A. Roebling Son's Co., New York and Trenton, N. J., at $1,398,000.

NIAGARA FALLS, N. Y.—Local papers state that three new bridges will be built this winter on the Gorge Ry.

JERSEY CITY, N. J.—The question of constructing a viaduct from Arlington Ave. to Van Horne St. is being agitated by the residents of that vicinity. Rev. L. C. M. Carroll is said to be the chief promoter of the project.

DARBY, PA.—Local papers state that the construction of a steel bridge with a concrete foundation across Cobb's Creek, to cost about $10,000, is proposed. Borough President Grayson will ask for bids upon the completion of plans.

EASTON, PA.—A company, known as the Lehigh Bridge Co., has applied for a charter for a bridge over the Lehigh River, near Adamson St., this city. John McNeal, Jr., Engr.

GLASSPORT, PA.—Bids will be received after Jan. 1 by Wm. Bell, Times Bldg., Pittsburg, according to reports, for constructing a combination suspension and stiffening truss bridge over the Monongahela River, about 1,200 ft. long, for the Glassport Bridge Co., to cost about $25,000.

PHILADELPHIA, PA.—Local papers state that two bridges are to be erected over Frankford Creek, at Frankford Ave., to cost about $90,000, which will be taken from the $600,000 appropriation for bridge construction. The question of constructing a steel and concrete bridge over Frankford Creek at Wyoming Ave., to cost about $100,000, is being agitated.

SMITHTON, PA.—Bids are asked by the county commissioners, Greensburg, until Dec. 14, for constructing a steel bridge 552 ft. long over the Youghiogheny River and the Pittsburg & Lake Erie R. R., to cost about $40,000, according to reports.

CHATTANOOGA, TENN.—The Nashville, Chattanooga & St. Louis R. R. Co. proposes to erect a viaduct, to cost about $50,000. J. W. Thomas, Pres., Nashville.

CLEVELAND, O.—Bids are asked until Jan. 10 for constructing a masonry arch, 85 ft. long, with 62-ft. span, under the L. S. & M. S. Ry. at Gordon Park, according to reports. C. W. Pratt, Ch. Engr.

CLEVELAND, O.—Plans for a new steel bridge at Breckville, and a new stone bridge at Euclid, are being prepared by the Osborn Co., Engrs., Osborn Bldg., Cleveland. Bids will be asked as soon as the plans are completed.

COLUMBUS, O.—The question of constructing a viaduct over the Toledo & Ohio Central and the Hocking Valley tracks on South High St., at Steelton, is being agitated.

TOLEDO, O.—W. F. Brown, Cy. Engr., writes us that no definite steps have been taken in regard to the proposed bridge at Jefferson St.

ELGIN, ILL.—Bids are asked until Dec. 15 for constructing a bridge over Fox River, on Chicago St., to have three girder steel spans about 92 ft. long, total length, 270 ft.; to be 6 ft. wide, with two 12-ft. sidewalks; also one over Fox River, at National St., with three low-truss riveted steel spans of 102½ ft. each, with 18-ft. roadway, and two 6-ft. sidewalks, according to reports. Arwin E. Price, Mayor.

KANKAKEE, ILL.—Robt. D. Gregg, Cy. Engr., writes us that the date of receiving bids for the superstructure of the proposed cement concrete bridge over the Kankakee River, at Washington St., has not yet been fixed. The structure will have six spans, two 100 ft. long, two 92 ft. long and two 97 ft. 6 ins. in length, and will be 32 ft. wide; estimated to cost $40,000. A. Geisel, Des. Engr., St. Louis, Mo.

MILWAUKEE, WIS.—Charles J. Poetsch, Cy. Engr., writes us that nothing definite has been done concerning the proposed bridge at Cedar and Biddle Sts. over the Milwaukee River.

CEDAR RAPIDS, IA.—Bids will be received in about 30 days for constructing a five-span steel Pratt truss bridge, each span 114 ft. in length, to replace the bridge over the Cedar River at Ave. B, according to reports. G. Merrideth, Cy. Engr.

DES MOINES, IA.—Local papers state that the board of public works will readvertise for bids for the construction of the abutments of the East Sixth St. bridge, as those received were in excess to the amount appropriated for the work. Plans for the North Sixth St. structure are completed, and call for a steel deck bridge with concrete and brick floor and two sidewalks. Specifications are now being prepared.

DUBUQUE, IA.—The promoters of the Eagle Point bridge will ask for a charter, and are now preparing specifications. Subscriptions amounting to $50,000 have been received, and bonds will probably be issued to secure the money needed.

OMAHA, NEB.—Local papers state that the Union Pacific Ry. will probably be ordered by the city to erect and maintain a bridge over the tracks on South 24th St.

SEATTLE, WASH.—The following bids were received by the county commissioners on Nov. 30 for constructing the new bridge over the Green River, at Elliott Station: Northwest Bridge Co., $1,529; San Francisco Bridge Co., $1,599; Bailey & Wilson, $1,661; Seattle Bridge Co., $2,-094; Christian Miller, $2,840.

PHILOMATH, ORE.—Geo. Mercer writes us that plans have not yet been made for the proposed bridge over the Long Tom River, and that nothing will be done towards the construction until spring.

LORENZO MARQUEZ, SO. AFRICA.—Bids are asked by the Minister of Public Works, or General Office of the Colonies, Lisbon, Portugal, until March 23, for constructing an iron bridge 853 ft. long and 65½ ft. wide at Lorenzo Marquez, Delagoa Bay, South Africa. Time to complete, 18 months; deposit, $10,920.

BUILDINGS.

AUGUSTA, ME.—Vickery & Hill will erect a new 3-story brick building, 60 × 35 ft., at Weston and Chapel Sts.

AUGUSTA, ME.—We are informed that G. E. Macomber, P. O. Vickery and J. F. Hill will erect an opera house.

BOSTON, MASS.—Plans have been filed by Edward Bangs for an 8-story brick apartment house at Westland Ave. and Hemmenway St., to cost about $200,000. J. Lavalle, Arch., 85 Devonshire St.; F. S. Robbins, Builder, Worcester.

SOUTH FRAMINGHAM, MASS.—The Kendall Opera House Building Association will build a music hall on Kendall St., 120 × 70 ft. W. H. Walsh, Pres.

WESTFIELD, MASS.—Plans have been prepared by A. W. Holton, 52 Elm St., for a 3-story hotel, 66 × 150 ft., for J. C. Buschmann, to cost about $40,000.

DANIELSON, CONN.—Plans have been prepared for a church building for St. James Catholic Church, to cost about $50,000.

HARTFORD, CONN.—Ernest Flagg, 15 Broad St., New York, is preparing revised plans for the new insurance building.

BROOKLYN, N. Y.—The D., L. & W. R. R. Co. has purchased a site at the foot of Clymer St. for a large freight yard.——The board has adopted a resolution giving the Brooklyn Institute of Arts and Sciences $300,000 for an addition.

BROOKLYN, N. Y.—H. S. Kearny, Comr. Pub. Bldgs., has decided to spend $50,000 on improvements to the 14th Regiment Armory building.

BUFFALO, N. Y.—Plans have been prepared by M. C. Eisenwein, 707 Mooney Bldg., for a music hall on Edward St., 73 × 192 ft., for the J. F. Schoellkopf Estate, to cost about $100,000.——The board has adopted the plan of M. J. Burke for a union passenger station.

BUFFALO, N. Y.—G. J. Metzger, 19 W. Huron St., is preparing plans for altering the old 74th Regiment armory building into a convention hall, to cost about $10,000.

BUFFALO, N. Y.—The lowest bidder on the mason work for public school 43 was John Lannen, at $46,700; on carpenter work, J. J. Huber, at $3,400; on roofing and metal work, J. G. Wilson, $6,664; on fireproof construction, the Buffalo Expanded Metal Co., at $6,381. The heating and plumbing bids have not been classified yet.

FORT HAMILTON, N. Y.—Bids are asked until Jan. 4 for erecting a double set of officers' quarters. S. E. Allen, Q. M.

LONG ISLAND CITY, N. Y.—The following bids for public school No 5 were received by the department of education, Manhattan, Dec. 11: John Loughley, 168 W. 25th St., $129,475; J. T. Woodruff, Long Island City, $139,982; P. J. Brennan, 22d St. and 6th Ave., $143,000; H. Probst, 1180 Broadway, $143,450.

NEW YORK, N. Y.—Norcross Bros., 160 5th Ave., are reported to have been awarded the contract for erecting a training school for the Horace Mann School, at about $250,000, and also for erecting the 6-story exchange building at 18th St. and Irving Place for the New York Telephone Co., at about $150,000.——It is stated that a Chicago syndicate will spend $3,500,000 in erecting an auditorium, hotel and theatre building.——Chas. S. Smith, Chn. Executive Com., has received about $1,000,000 for erecting a house for the Chamber of Commerce.

NEW YORK, N. Y.—Bids are asked until Dec. 18 for erecting an addition to pavillion F, Randall's Island. J. W. Keller, Pres. Dept. Pub. Charities.——J. Kastner & Sons, 1133 Broadway, are preparing plans for rebuilding the factory, 94 Mott St., recently burned. J. W. Hamburger, 3 E. 128th St., owner.——The Whist Club of New York, 11 W. 36th St., has purchased the building 13 W. 36th St., and will renovate it and erect a three-story extension.——The Building Committee of the Lying-in Hospital has prepared plans for an 8-story brick hospital, at 17th to 18th St. and 2d Ave., to cost about $1,305,000. L. C. Ledyard, Chn.Com.——Plans have been filed by F. A. Seitz, 143 W. 125th St., for a 7-story brick apartment house, 120 × 96 ft., at 113th St. and St. Nicholas Ave., to cost about $125,000. F. C. Burne, Arch.; by H. White, 1046 E. 169th St., for five 3-story dwellings, 20 × 65 ft., at Crotona Park South, near Clinton Ave., to cost about $30,000. Hunter & Murgatroyd, Archs.; by Chas. Brogan, 1165 Washington Ave., for two 5-story brick flats, 25 × 87 ft., at 160th St. and Courtlandt Ave., to cost about $43,000. Neville & Bagge, Archs., 217 W. 125th St.; by Elias Kempner, 55 E. 61st St., for two 6-story brick flats, 25 × 90, at 533 and 535 E. 11th St., to cost about $50,000. G. F. Pelham, Arch., 503 5th Ave.; by Michael Tully, 210 W. 105th St., for a 7-story brick apartment house, 50 × 92 ft., at 310 W. 80th St., to cost about $125,000. J. E. Ware & Son, Archs., 3 W. 29th St.; by J. Fischel, 216 Clinton St., for three 7-story brick flats, 25 × 70 and 62 ft., at Sheriff and Stanton Sts., to cost about $75,000. M. Bernstein, Arch., 245 Broadway.

NEW YORK, N. Y.—Plans have been filed by W. A. Hall, 687 Madison Ave., for two 5-story brick dwellings at 875 and 876 5th Ave., to cost about $160,000. Welch, Smith & Provost, Archs.; by J. P. Leo, owner, architect and builder, 143 W. 125th St., for a 6-story brick flat, 50 × 90 ft., at 146th St. and Amsterdam Ave., to cost about $40,000; by Dora Sheer, for two 6-story brick flats, at 100th St., near 3d Ave., to cost about $70,000. Moore & Landseidel, Archs.

SCHENECTADY, N. Y.—The contract for the masonry work on St. John's Church has been let to John McDermott, at about $70,000, and for the carpenter work to Edw. Harrington, at about $35,000.

ATLANTIC CITY, N. J.—James Knott, Judson Hotel, Washington Square, New York, will erect a hotel to cost $50,000.

JERSEY CITY, N. J.—G. B. Post, 33 E. 17th St., New York, has prepared plans for a 12-story office building, 72 × 160 ft., for the Commercial Trust Co., of New Jersey.

LONG BRANCH, N. J.—Edgar Zielian, Elberon, will erect a Catholic school building, to cost about $40,000.

PASSAIC, N. J.—The contract for erecting a mill to cost $100,000 for the Gera Mfg. Co., of Germany, has been let to J. W. Ferguson, Paterson National Bank Bldg., Paterson.

RUTHERFORD, N. J.—The board of education will erect a 3-story brick school building on Park St., to cost about $50,000.

ALLENTOWN, PA.—Jacoby & Weishampel, Commonwealth Bldg., has prepared plans for two school buildings.

CHESTER, PA.—The Board will re-advertise for bids for the new high school building, those received were above the estimated cost of $100,000.

CONNELLSVILLE, PA.—Plans are being prepared for a new 3-story brick City Hall building.

GETTYSBURG, PA.—The Church of the Prince of Peace will be built, at a cost of about $75,000.

PHILADELPHIA, PA.—Bids are asked, according to reports, by J. W. De Long for erecting a 7-story brick apartment house at Chelton Ave. and Knox St., Germantown—Frank Fox, Arch., 3505 N. 15th St.; by W. R. Dougherty for erecting a 4-story brick building, 41 × 48 ft., at 1413 Arch St., for the Catholic Philopatrian Literary Institute—H. D. Dagit, Arch., 435 Chestnut St.; and by R. J. Aikens, 114 N. 13th St., for erecting 56 2-story brick dwellings.——It is stated that the American Bank Note Co., 78 Trinity Place, New York, will erect a 10-story brick office building.——Peter A. B. Widener will erect a hospital and home building, to cost about $2,000,000. Horace Trumbauer, Arch., Land Title Bldg.

PHILADELPHIA, PA.—The Pennsylvania Iron Works, Land Title & Trust Bld., will erect a machine shop at 50th St. and Merion Ave.——C. I. Metzgar will build five 3-sty brick dwellings at 40th St., near Spruce.

PHOENIXVILLE, PA.—Plans are being prepared for a new armory building to replace the one destroyed by fire.——The Chester Springs Soldiers' Orphans' School will erect a new building at once.

PITTSBURG, PA.—Plans have been prepared by W. A. Thomas, 1211 Carnegie Bldg., for a 3-story brick apartment house, to cost about $60,000; and by Rutan & Russell, 1011 Tradesmen's Bldg., for brick residence on 5th Ave. for J. H. McCutcheon, Allegheny.——W. H. Keech, Col. A. J. Logan and J. H. Willock have been appointed a committee to secure funds for erecting an armory building.

WILLIAMSPORT, PA.—Plans are being prepared for a 3-story brick school building, to cost about $50,000.

WASHINGTON, D. C.—Plans have been prepared by Mr. Hill, Treas. Dept., for a 9-story brick building for the Government Printing Office, at Grand and North Capitol Sts., N. W., to cost about $2,429,000. Work will start when Congress approves the plans.

BALTIMORE, MD.—Charles McCaul, 10 N. 11th St., Philadelphia, has the contract for erecting a 12-story brick office building for the Continental Trust Co. at Calvert and Baltimore Sts. D. H. Burnham & Co., Archs., 1142 Rookery Bldg., Chicago.

CENTREVILLE, MD.—Plans have been prepared by G. A. Archer, Central Bank Bldg., Baltimore, for a 2-story brick school building.

HAMPTON, VA.—Bids are asked until Dec. 20 for erecting a building for the Bank of Hampton. Check, $1,000. J. W. Rowe, Pres.

NEWPORT NEWS, VA.—The school committee has asked for an appropriation of $40,000 for erecting two new school buildings.

NORFOLK, VA.—Berkley Lodge, B. P. O. E., will erect a brick office and lodge building at Chestnut and Middleton Sts.——J. E. R. Carpenter and J. K. Peebles, Columbia Bldg., have been selected to prepare plans for the new jail.

WHEELING, W. VA.—Bids will soon be asked by the fire department committee for erecting a new engine house.

AUGUSTA, GA.—Fire destroyed the block surrounded by Broad, Ellis, 7th and 8th Sts. Dec. 10; reported loss, about $900,000.

CARTERSVILLE, GA.—The question of issuing $30,000 in bonds for erecting a court house was defeated at the election held recently.

FLORENCE, ALA.—The question of erecting a 3-story brick library building is being discussed.——The contract for erecting the new school house has been let to W. E. Temple.

SELMA, GA.—Plans have been prepared for the new 2-story brick court house, to cost about $40,000, according to reports.

SYLACAUGA, ALA.—The contract for erecting the cotton mill for the McDonald Mills Co. has been let to T. L. Houser & Co., of Anniston.

JACKSON, MISS.—J. W. Gaddis, Vincennes, Ind., has prepared plans for a building for the Deaf and Dumb Institute.

MEMPHIS, TENN.—Col. N. Hill will erect a building at Gayoso and Main Sts., to cost about $90,000.

LOUISVILLE, KY.—Chas. T. and T. Ballard will erect a 10-story brick office building at 5th and Main Sts., to cost about $125,000. Herman Wolters, Arch., 910 Columbia Bldg.

BARBERTON, O.—It is stated that the Columbia Chemical Co. will build a town of 200 houses near here.

CLEVELAND, O.—The board of education will ask for $150,000 for a new high school building and $100,000 for a headquarters building.

WABASH, IND.—Christian Risser is preparing plans for an 8-room school building, to cost about $17,000.

DETROIT, MICH.—The plan of W. H. Aubrey to erect a Jeffersonian Hotel, to cost about $2,000,000, is being discussed.

CHICAGO, ILL.—A. H. Lowden, 1142 The Rookery, has prepared plans for a new plant for G. A. Crosby & Co., at 2844 Archer Ave., to cost about $40,000.——The school board has recommended 14 new school buildings for next year.——The Northwestern University has asked for $3,-000,000 for new buildings.——The "Tribune" will erect a new 4-story stone building at Madison and Dearborn Sts., to cost about $400,000.

PEORIA, ILL.—The trustees of the Asylum for Incurable Insane are considering the question of completing the alterations started some time ago, at a cost of about $30,000.

MINNEAPOLIS, MINN.—The Hennepin Ave. M. E. Church will erect a hospital building, to cost about $100,000.

PIPESTONE, MINN.—Bids are asked by the county commissioners until Jan. 3 for erecting the new court house.

OMAHA, NEB.—The question of issuing $250,000 in bonds for rebuilding the court house will be voted on at the next election.

DEADWOOD, S. DAK.—The Masonic Benevolent Association has decided to complete its temple, at a cost of about $40,000.

KALISPELL, MONT.—The question of issuing $40,000 in bonds for a new court house will be voted on Jan. 13.

TOPEKA, KAN.—Bids are asked until Dec. 21 for erecting the city building, postponed from Dec. 11. P. L. Wise, Cy. Engr.

ROLLA, MO.—H. H. Hohenschild is preparing plans for the state asylum No. 4, to cost about $150,000. They will be ready Jan. 15.

ST. LOUIS, MO.—Plans have been filed by the St. Louis Refrigerating & Cold Storage Co. for a 7-story storage building at Lewis, near Dickson St., to cost about $175,-000; by the Olivia Building Co. for a 4-story office building at Windsor Place and Grand Ave., to cost about $50,000.

ST. LOUIS, MO.—R. C. Ferguson, Commercial Bldg., has prepared plans for a 4-story mill, 100 × 100 ft., at 8th and Gratiot Sts., to cost about $40,000.

EL PASO, TEX.—Andrew Carnegie has given $50,000 for a new public library.

ASHLAND, ORE.—Geo. W. Trefren, School Clk., writes us that District 5, Jackson county, will erect a school building, to cost about $15,000.

ALTURAS, CAL.—Bids are asked until Jan. 2 for furnishing cells for the new jail. L. S. Smith, County Clk.

LOS ANGELES, CAL.—Bids are asked until Dec. 26 for furnishing two 72-in. × 16-ft. boilers, set, one horizontal, duplex pump and fittings, 500 gallons a min.; one accumulator, 78-in. × 16-ft.; one 2,130-gal. steel tank, one exhaust steam water heater. C. W. Bell, Cy. Clk.

NEVADA CITY, CAL.—Bids are asked until Jan. 9 for constructing a jail. F. L. Arbogast, County Clk.

SAN DIEGO, CAL.—The Library Trustees will advertise soon for plans for a library building, to cost about $50,000.

BOISE, IDAHO.—John Gage, J. R. Morrow and others will erect a 5-story hotel at 10th and Main Sts., to cost about $65,000.

LONDON, ENGLAND.—Reports state that the following bids were received by the Commissioners of Her Majesty's Works and Public Buildings last month, for erecting the new Post Office Savings Bank building at West Kensington; these are approximate bids at $5 to the pound sterling:

Martin, Wells & Co., Acre Whf, Belvedere Rd, S.E.	$1,365,000	
J. Mowlem & Co., 19 Grosvenor Road, S.E.	1,300,000	
Foster & Dicksee, Maurcsa Road, Chelsea, S.W.	1,229,900	
B. E. Nightingale, Albert Embankment, S.E.	1,195,000	
J. Shillitoe & Son, 63 Old Kent Road, S.E.	$1,175,000	and 1,275,000
Perry & Co., Ordell Road, Bow St., E.		1,148,450
W. H. Lorden & Son	$1,144,440	and 1,194,440
Kirk & Randall, Warren Lane, Woolwich	$1,089,700	and 1,214,700

WATER-WORKS.

BOSTON, MASS.—Long & Little, Leominster, Mass., have been awarded the contract by the Metropolitan Water Board, Boston, for excavating the soil, Section 7, and building part of westerly portion of the north dike, Wachusett Reservoir, at $238,500. The itemized bids were given in our issue of Nov. 23.

SPRINGFIELD, MASS.—The water board has submitted its report for an increased water supply. It is recommended that the supply be secured from the junction of the middle and eastern branches of the Westfield River. The cost limit is placed at $1,300,000, but it is thought that the improvement can be built for much less.

UTICA, N. Y.—The Consolidated Water Co. is reported to have decided to double the present water supply by securing water from Reals Creek. Geo. L. Record, Pres.

ASBURY PARK, N. J.—Wm. C. Hendrickson, Vice-Pres. Tintern Manor Water Co., writes us that nothing has been done as yet towards letting contracts for the works, etc., for this company, recently incorporated, with a capital stock of $1,000,000. John L. Wentz, Scranton, Pa., and Cecil C. Higgins, Poundbridge, N. J., are interested.

NEW EGYPT, N. J.—The question of works is reported as being considered.

PATERSON, N. J.—The People's Water Co. has been incorporated, with a capital stock of $500,000, to sink artesian wells for a water supply. Chas. Sweeney, Spokane, Wash.; Geo. P. Pfeifer, Jr., Contractor, Camden, N. J., and Senator Christian Braun, of Paterson, are interested.

MERCERSBURG, PA.—The Mercersburg Water-Works Co. has secured its capital stock, $25,000, and work, it is stated, will soon be begun on the proposed plant.

MIDDLETOWN, PA.—Bids are asked until Dec. 27 for the purchase of about 62,750 ft. of wrought-iron pipe, two wood tanks, three trestles and a quantity of valves, spigots, cocks, hydrants, etc., now on government property at Camp Meade. N. H. Creager, Q.-M.

PITTSBURG, PA.—The Allegheny Valley Ry. Co., it is reported, proposes, among a number of other improvements, to spend about $90,000 for a power and pumping station. F. M. Ashmead, Res. Engr.

ANNVILE, PA.—The Annville Water Co. is reported as considering the question of an additional water supply.

READING, PA.—B. Klemmer, a mineral prospector, 604 North 10th St., writes us that it is proposed to sink two 30-in. artesian wells about 200 ft. deep for a better water supply. F. P. Heller, Pres. Water Bd.

REEDSVILLE, PA.—P. D. Wanner, Pres. Reedsville Water Co., writes us that the company is preparing for early operations on the proposed works. Wm. I. Yeager, Vice-Pres.; R. B. Kinsey, Secy.

STEELTON, PA.—The works, etc., of the Steelton Home Water Co. have been sold to the city for $72,368, subject to a mortgage of $80,000. P. D. Wanner was President of the company.

WILMINGTON, DEL.—J. A. Bond, Ch. Engr., writes us that the following bids were received Dec. 5 for taking up and relaying a 20-in. water main across the Christiana River: S. W. Frescoln, Reading, Pa., $20 a lin. ft. laid; total, about $8,000. Capt. John J. Williams, Chester, Pa., $3,120.

HANCOCK, MD.—It is reported that Robt. Bridges, Edmund P. Cohill and Peter E. Dawson are interested in the proposed works and an electric plant, for which plans are being prepared.

HYATTSVILLE, MD.—A committee has been appointed to further investigate the question of works, to cost about $70,000. Dr. Chas. E. Portley, Pres. Bd. Town Comrs.

CRYSTAL SPRINGS, MISS.—C. A. Redding, Clk., writes us that an election will be held Dec. 18 to vote on the question of issuing $25,000 in bonds for works and an electric plant. Population, 1,200.

STARKVILLE, MISS.—F. L. Wier, Mayor, writes us that the proposed water supply will be secured from a well 129 ft. below the surface. A duplex air compressor will be used. The town will vote Dec. 28 on the question of issuing $22,500 of 5% 20-year bonds for works. It the issue is authorized arrangements for the sale will be made Jan. 2. T. M. Cummings, Town Clk.

LAKE CHARLES, LA.—G. T. Rock writes us that specifications are being prepared for works and an electric plant. The question of a sewerage system is being considered.

CHATTANOOGA, TENN.—John Orr, Mgr. Chattanooga Co., Ltd., writes us that nothing has yet been decided regarding the proposed works for Hill City, which, a report states, will cost about $40,000.

GALLATIN, TENN.—The aldermen have let the contract for constructing works to the Standard Bridge & Boiler Co., of Warren, O., at about $40,000.

JACKSON, TENN.—The question of an increased water supply is being considered, according to reports. Sam'l Lancaster, Engr.

MASSILLON, O.—The question of this city buying the works of the Massillon Water Supply Co. will be voted upon at the spring election.

NORWOOD, O.—E. D. Massie, Clk., writes us that the contract has been let to the Bacon Air Lift Co., 100 Broadway, New York, for re-designing the air lift of the works. The Bacon air lift will be substituted.

YOUNGSTOWN, O.—Chairman Clark is reported to have appointed Messrs. Woolley, Welch, Mayor Moore and Commissioner Cornelius as an advisory committee to work in conjunction with City Engineer Lillie on plans for a better water supply.

KNOX, IND.—This place is reported to have voted against the proposition to put in works and an electric plant.

DETROIT, MICH.—John W. McGrath, Vice-Pres. Water Bd., writes us that it is proposed to construct about five miles of 42-in. mains and two new high pressure engines, to cost about $500,000. In the course of a few years the city will probably build a tunnel to take the place of the present intake pipes. The tunnel will be built with reference to a filtration plant.

SARANAC, MICH.—The election to vote on the question of issuing $12,000 in bonds for works will be held Dec. 18.

HIGHLAND PARK, ILL.—Edward Laing writes us that 3,500 ft. of 6-in. water main will be built in 1900. The filtration ordinance will come up for discussion in January. Population, 3,100.

KENOSHA, WIS.—R. H. Moth, Cy. Engr. and Supt. Water-Works, writes us that the present pumps are too small and it is proposed to install a 5,000,000-gallon high duty pump next year.

NORTH MILWAUKEE, WIS.—W. E. Chase, Village Clk., writes us that no steps have yet been taken regarding a water supply.

OCONOMOWOC, WIS.—Bids were received Dec. 8 for constructing a pumping station. O. C. Peters, Cy. Clk.

CEDAR RAPIDS, IA.—J. M. Redmond writes us that an election will be held Dec. 18 to vote on the question of authorizing the council to lease the works to be constructed at a cost of $500,000, for an annual rental not to exceed $38,000. The city is to own the works in about 23 years. Population, 28,000.

DUBUQUE, IA.—The Dubuque Water Co. has offered to have the matter of the sale of the works to the city settled by arbitration. Address Mayor Berg.

WEST DULUTH, MINN.—The council is again considering a resolution offering the Duluth Water & Light Co. $100,000 for its West Duluth Works. If the offer is not accepted by Dec. 30 the city will take steps to build a new plant.

OMAHA, NEB.—Alderman C. O. Lobeck is reported as securing data regarding the municipal ownership of works, as the question is being considered by this city. The company considers the works worth about $8,000,000.

BUTTE, MONT.—Bids are asked until Jan. 4 for furnishing the materials and for extending the works, as stated in our advertising columns. Eugene Carroll, Engr.

HELENA, MONT.—This city voted against the proposition Dec. 4 to buy the works.

WELLINGTON, KAN.—An election will be held Dec. 30 to vote on the question of issuing $50,000 in bonds for works, and $14,000 in bonds for an electric plant.

SPRINGFIELD, MO.—We are informed that the Spring Water-Works Co. will build reservoirs in the spring to have a capacity of from 20 to 40 million gallons. The work will be done by the company.

FORT WORTH, TEX.—J. B. Hawley, Cy. Engr., writes us that no bids were received Dec. 1 for a new water supply, advertised in Engineering News Nov. 2 and 9.

CRIPPLE CREEK, COLO.—Henry B. Smith, Bay City, Mich., who is interested in the Cripple Creek works, writes us that improvements to the works will be made next season.

CARTERS, CAL.—The Main River Water Co. has been organized to build works and a power plant, to cost about $100,000, for furnishing the mines with water and electric power.

DIXON, CAL.—G. G. Halliday, County Clk., writes us that the following bids were received Dec. 4 for furnishing eight 130,000-gallon pumping engines: Rumsey & Co., Seneca Falls, N. Y. (accepted), $1,404; Krough Mfg. Co., San Francisco, Cal., $1,450; Eppinger & Co., Dixon, Cal., $1,375; Byron, Jackson Co., San Francisco, Cal., $1,350; J. D. Johnson, Dixon, Cal., $1,367.

LOS ANGELES, CAL.—The council received but two bids, from W. J. Hayes & Sons, Cleveland, O., and the Adams-Phillips Co., for the purchase of $2,090,000 of bonds for the purchase of the works. Both bids are unsatisfactory.

TEMPE, ARIZ.—F. M. Schureman, Town Clk., writes us that the contract for constructing works has been let to the Phoenix Construction Co., Fisher Bldg., Chicago.

SALT LAKE CITY, UTAH.—Local papers state that bids will soon be asked by the board of public works for new water mains, to cost $10,000. The report for an increased water supply, to cost $104,000, has been submitted by F. C. Kelsey, Cy. Engr.

LEWISTON, IDAHO.—It is stated that the works of the Lewiston Water Co. will be transferred to the city May 1. The city paid $80,000 for the works.

BRANTFORD, ONT.—F. W. Frank, Secy. Water-Works, writes us that the contract for a new 5,000,000-gallon pump will be let as soon as possible after the by-law is passed.

HAMILTON, ONT.—Bids are asked until noon Dec. 20 for furnishing 30 and 20-in. cast-iron water pipe and for extending filter basins and laying conduit. Thos. Beasley, Cy. Clk.

LINDSAY, ONT.—The town clerk writes us that this place will vote Jan. 1 on the question of purchasing the works. Population, 7,500.

GOLDEN, B. C.—The question of building works in the summer is being considered, according to reports.

CALGARY, ALBERTA, CAN.—C. McMillan, Clk., writes us that it has not yet been decided whether this city will build new works or buy the present plant. Willis Chipman, Consult. Engr., 103 Bay St., Toronto; G. A. Stewart, Cy. Engr.

SEWERAGE.

AUGUSTA, ME.—Plans for new sewers are being prepared by I. F. Getchell and N. B. Getchell.

CAMBRIDGE, MASS.—The plans prepared by City Engineer Hastings for the new storm sewers to cost about $400,000 have been approved. Howard A. Carson, Consult. Engr., Boston, and submitted to the committee.

HOLYOKE, MASS.—City Engineer Tighe has submitted his report on the sewerage and drainage system of the city, in which he has recommended the diversion of the sewage from Walnut St. into the Front St. trunk, at a cost of about $10,200. The construction of sewers for the Highlands is also recommended; estimated cost $31,000.

NEWBURYPORT, MASS.—The question of extending the system in Ward 6 is being considered. Plans for the improvement, as prepared by Engineer Bowditch some years ago, have been submitted to the committee on sewerage by Superintendent Curtis; estimated cost, $50,000. The council has adopted an order authorizing the mayor to petition the general court to bond the city for $75,000 for sewerage purposes.

SWAMPSCOTT, MASS.—K. Pollard, Ch. Com., writes us that plans for a system are being prepared, and that contracts will be let next spring. The system will be 20 miles long. Frank L. Fuller, Des. Engr., 12 Pearl St., Boston.

WAKEFIELD, MASS.—Rice & Evans, Consult. Engrs., Boston, have been instructed to prepare preliminary plans for a system for this place. The first division will be about eight miles in length. Work will be started in the spring, according to reports.

ALBANY, N. Y.—A resolution was adopted at the meeting of the board of contract and apportionment Dec. 4, authorizing the city engineer to prepare plans for an intercepting sewer.

BUFFALO, N. Y.—Bids are asked until Dec. 21 for constructing a 15 to 27-in. brick sewer in Mumford Ave., from Cazenovia Creek to Edgewood Ave. R. G. Parsons, Secy. Bd. Pub. Wks.

CANAJOHARIE, N. Y.—We are informed that plans and specifications have been completed for the system. No appropriation will be made until the proposition is voted on. F. E. Crane, Amsterdam, N. Y., and Morrell Vrooman, Fort Plain, N. Y., Des. Engrs.

JAMAICA (L. I.), N. Y.—The question of completing the system, for which $94,000 was appropriated by the municipal assembly of New York some time ago, is being discussed by the citizens of this town. Wm. F. Wyckoff, W. E. Everitt and Sheriff Baker are interested.

NEW YORK, N. Y.—Bids are asked by the department of sewers, 21 Park Row, until Dec. 20, for sewers in two streets in the borough of Bronx, and in three streets in the borough of Brooklyn.

NEW YORK, N. Y.—Bids are asked until Dec. 23 for rebuilding sewer in East 149th St., Borough of Bronx, and for building an earth embankment over sewers in seven streets. Jas. Kane, Comr. of Sewers, 21 Park Row.

GLOUCESTER CITY, N. J.—The state commission gave a hearing Dec. 4 on the application of the borough of Collingswood, represented by R. T. Collins, for permission to build a sewer to empty into Newton Creek. The plans prepared by Engineer Ledoux call for a reservoir to hold 350,000 gallons of sewage to be discharged in the creek at mean tide.

PASSAIC, N. J.—Thos. R. Watson writes us that it is proposed to construct 30,000 ft. of 8-in. pipe sewer, to cost about $25,000, and a 20-in. storm pipe sewer, 10,000 ft. long; estimated to cost $15,000. C. R. Wise, Cy. Surv.

VINELAND, N. J.—Plans for a new system have been prepared and will be submitted to the state commission for approval. The plans provide for the emptying of the sewers in the Maurice River, and a plant for the purification of the sewage before discharged into the river.

BELLEVUE, PA.—A sewer will be built in Jacks Run making connections with the Allegheny sewer, as agreed upon by the Bellevue committee and the Allegheny committee. The contract will soon be let for building a sewer in Shade St., to carry the Bellevue sewage through Spruce Run to the Ohio River through Avalon and Ben Avon.

HAZELTON, PA.—The plans for the proposed system in the section known as the Diamond, extending from Lincoln St. west to Altar, and from Diamond Ave. to Seventh St., have been completed by A. Brooks Celiax, Cy. Engr.; estimated cost, $43,000.

McKEESPORT, PA.—A. B. O'Neil, select councilman, writes us that plans are now being prepared for an 8-ft. sewer in Fifth Ave., to be about one mile in length.

PITTSBURG, PA.—Bids are asked until Jan. 1 for preparing plans for laying out streets and a sewerage system for Verona. Dr. Geo. H. Scott, 1512 Penn Ave.

PITTSBURG, PA.—Bids are asked until Dec. 18 for constructing a 24-in. pipe sewer in Kelly St., from Braddock to Homewood Ave., and for paving and laying sidewalks on Herron Ave., from 33d St. to Center Ave. Edward M. Bigelow, Dir. Pub. Wks.

WASHINGTON, PA.—R. S. Winters, Burgess, writes us that the construction of the proposed sewer is postponed indefinitely. D. J. McAdam, Des. Engr.

WESTFIELD, PA.—Local papers state that the construction of sewers to cost about $5,000 is proposed.

WILKES-BARRE, PA.—We are informed that Contractor Edward M. Post did not bid on the work of completing the Empire sewer, nor was he awarded the contract, as incorrectly stated in our issue of Dec. 7. Mr. Post has never failed to complete a contract after having secured it.

TARBORO, N. C.—The contract for constructing a system in this town has been let to Guild & [illegible], Chattanooga, Tenn., at $7,259; Montague & Co., Chattanooga, Tenn., received the contract for pipe at $2,519.

WAYCROSS, GA.—At an election held Dec. 2 it was voted to bond this town for $35,000 for constructing a system.

GREENVILLE, MISS.—It is stated that the contract for constructing a system 15 miles long, to cost about $80,000, was let to Gabourv & Hebron on Dec. 4. Alex. Potter, Des. Engr., 137 Broadway, New York.

LAKE CHARLES, LA.—G. T. Rock writes us that a system is proposed for this place.

CLEVELAND, O.—The plan to build an intercepting sewer through Glenville on the right of way of the Lake Shore R. R., has been abandoned by City Engineer Kinnie. A commission, composed of Director of Public Works Rice, Director of Law Hagslett, and City Engineer Kinnie has been appointed to consult with Morris Cleveland and F. P. Williams, composing the Glenville representatives, for a right of way for a sewer through Glenville.

TOLEDO, O.—Bids are asked until Dec. 15 for constructing sewers in five alleys in this city. Wm. G. Haist, Cy. Clk.

YOUNGSTOWN, O.—Local papers state that City Engineer Frank Lillie has visited Columbus to confer with Dr. Probst, Secy. State Bd. of Health, on the question of constructing the Crab Creek sewer. Dr. Probst has favored the improvement.

WABASH, IND.—We are informed that plans are being prepared by City Engineer Robt. P. Woods for a system for the Northern District.

DULUTH, MINN.—Thos. F. M. McGilvray, Cy. Engr., writes us that he is preparing plans for a system in West Duluth, which he expects to have completed by next March.

TAYLOR, TEX.—The sanitary committee of the council is said to be considering the question of a system for this city.

TERRELL, TEX.—J. G. Boyd, Secy. Terrell Industrial Association, writes us that the city has appointed a committee to confer with the association's committee in regard to a system for this place.

DENVER, COLO.—The board of public works received Dec. 5 the following bids for constructing the 16th St. sewer: O'Rourke Construction Co., $11,075 (accepted); Callahan & Hughes, $11,900; R. P. McDonald Building Co., $13,305.

PUEBLO, COLO.—Geo. F. West, Mayor, writes us that a storm sewer, etc., is proposed for this city, to cost about $30,000. The sewer will be 8 ft. in diameter and two miles long. Asphalt paving amounting to $20,000 is also proposed.

TACOMA, WASH.—City Engineer Taylor has been requested by Councilman Patterson to prepare an estimate of the cost of installing a system in South Tacoma, preparatory to his effort to induce the council to have the improvement made.

HARTFORD, CAL.—The system proposed for this place will probably need a combined gravity and pumping irrigation system for the disposal of sewage, to cost about $50,000 for the central district. About $50,000 more will be necessary to extend the system to corporation limits, exclusive of the cost of land.

POMONA, CAL.—City Engineer Sanders has been instructed to prepare plans for a sewage disposal with outfall sewer, to be located on the Currier site.

BRIDGETOWN, N. S.—At an election recently held it was voted against the issuance of $11,000 in bonds for sewers.

SYDNEY, N. S.—The town clerk writes us that no work on sewer or water-works extensions will be done until April; when further legislation will be asked and surveys made.

GARBAGE DISPOSAL—STREET CLEANING

PHILADELPHIA, PA.—The contract for collecting the garbage for the entire city for 1900, the bids for which were given in our last issue, has been let to the American Product Co., 1106 Land Title Bldg., for $398,000. This company holds the contract for the present year at $358,000. There were only two other bids for the work, those of Peoples & Bro., 25th and Callowhill Sts., $444,000, and Geo. W. McClintock, 804 Girard Bldg., $493,000.

WHEELING, W. VA.—The question of building a crematory is again being discussed.

NEW ORLEANS, LA.—The council is reported to have been asked to appropriate $2,500 for a street sweeper.

CHICAGO, ILL.—Bids are asked until Dec. 18 for hauling garbage, etc., for the county commissioners. D. D. Healy, Supt. Pub. Service, County Court House.—W. E. Crassette, Asst. Supt. Streets, writes us that plans have been prepared and bids will be asked in a week or so for garbage collection, and for disposal either by incineration or reduction.

GALVESTON, TEX.—The following bids were recived Dec. 1 for garbage disposal plants: Davis Garbage Co., Lancaster, Pa., one 75-cu. yd. plant, $9,500; two plants, $18,000; Balin & Orendorf, Dallas, Texas, one 75-cu. yd. plant, $11,500; two plants, $21,500; Dixon Garbage Co., Toledo, O., plant of adequate capacity, $9,678 each; American Incinerating Co., Toledo, O., single stack plant, $19,646; double stack, $36,840.

STREETS AND ROADS.

BOSTON, MASS.—The board has authorized the grading and paving of Battery St. J. H. Jenkins, Secy.—The contract for filling the sidewalk on Bennington St. has been let to Jones & Meehan, Beacon St., at $43,400.—The question of laying out Birch St. and widening Geneva Ave. is being discussed.

COLEBROOK, CONN.—It is stated that the contract for street improvements will soon be let.

HARTFORD, CONN.—Bids are asked until Dec. 19 for the purchase of $120,000 of street improvement bonds. C. C. Strong, Cy. Treas.

WATERBURY, CONN.—R. A. Cairns, Cy. Engr., has been directed to prepare plans for extending Jewelry St.

ALBANY, N. Y.—E. A. Bond, State Engr., writes us that no more good roads contracts will be let until next year.

BUFFALO, N. Y.—The City Clerk writes us that the council has passed a notice of intention to pave Forest Ave.

GENEVA, N. Y.—The council has appropriated $85,717 for street improvements next year.

NEW YORK, N. Y.—Bids are asked until Dec. 21 for repairing asphalt on portions of 58 streets, and for asphalting on two streets in Brooklyn and asphalting one street and grading one street in Manhattan. J. P. Keating, Comr. Highways, 21 Park Row.

NORTH TONAWANDA, N. Y.—T. W. Banally, Cy. Engr., writes us that the city will widen Goundry St. at its junction with Webster St.

SCHENECTADY, N. Y.—The taxpayers have asked the council to pave Villa Road.

STAPLETON (S. I.), N. Y.—The Richmond County Driving Club, M. J. Kane, Secy., is trying to secure a speedway on or near the Southfield Boulevard.

JERSEY CITY, N. J.—Bids are asked until Dec. 20 for resetting sidewalk and curb on Montgomery St. G. F. Farrell, Cy. Clk.

PATERSON, N. J.—John Hinchliffe, Mayor, writes us that no contracts for paving will be let until after March 15.

DARBY, PA.—The council has authorized the issue of $45,000 in bonds for road improvements.

READING, PA.—The council has appropriated $100,000 for street improvements.

FT. MEYER, VA.—G. H. Rucker, County Clerk, writes us that the supervisors have not perfected the plan for a bond issue.

NEWPORT NEWS, VA.—T. Chalkley Hatton, Wilmington, Del., is preparing plans for the improvement of streets in this city, for which $250,000 will be spent next year. A. A. Moss, Mayor, writes us that bonds have been issued.

PETERSBURG, VA.—N. J. Paterson, Jr., Pres. Com. Council, writes us that Sycamore St. will be asphalted, cost about $15,000, and that paving to the extent of about $80,000 is contemplated.

ATLANTA, GA.—It is stated that the county commissioners have agreed to pay half the cost of paving Peters St.

NEW ORLEANS, LA.—Bids are asked until Dec. 18 for brick sidewalks on four streets. W. S. Douglas, Compt.

CINCINNATI, O.—C. C. Bragg is reported to have offered to pay two-thirds of the cost of improving Woodburn Ave.——T. B. Punshon, Cy. Engr., has reported Rubel Bros., Hays Ave. and West Fork Road, to be the lowest bidders on the Elberon Ave. improvement, at $13,990.

CLEVELAND, O.—Jas. Ritchie, Ch. Engr., estimates the cost of Bank St. extension at $101,911.

McCONNELLSVILLE, O.—The contract for paving Centre St. has been let to J. C. Bolen, Zanesville, at $13,600.

TOLEDO, O.—W. F. Brown, Cy. Engr., writes us that the council will ask to have the law changed so that Summit Ave. can be paved by direct legislation.——W. Holst, Cy. Clk., writes us that the contract for paving Detroit Ave. with blocks has been let to G. L. Holder.

YOUNGSTOWN, O.—Bids are asked until Dec. 18 for grading E. Woodland Ave. W. R. Leonard, County Audr.

GREENSBURG, IND.—Bids are asked until Dec. 15 for improving and paving with brick Lincoln St. Wm. Brazelton, Cy. Clk.

MARION, IND.—Bids are asked until Dec. 19, improving and paving Butler Ave. and the alley west of Grove St. C. G. Robbins, Cy. Clk.

SOUTH BEND, IND.—Bids are asked until Dec. 25 for asphalting E. Jefferson St. and Colfax Ave., and paving South St. with brick. L. A. Hull, Cy. Clk.

WABASH, IND.—The council passed a resolution Dec. 11 to pave Hill St. with 22,000 yds. of asphalt. R. P. Woods, Cy. Engr.

DETROIT, MICH.—M. P. Hurlbut, Secy. Park Comrs., writes us that nothing has been done regarding the proposed speedway.

WYANDOTTE, MICH.—The question of paving Biddle Ave. is being discussed.

CHICAGO, ILL.—The question of the following street improvements will be discussed by the board at its next meeting: Paving with brick portions of 14 streets, cost about $547,500; with macadam, portions of three streets, cost about $248,000; with asphalt, portions of six streets, cost about $215,700; with blocks, portion of one street, cost about $26,000, and with granite, portions of three streets, cost about $31,500.

MILWAUKEE, WIS.—C. J. Poetsch, Cy. Engr., writes us that the park board is condemning land for the Highland boulevard, 130 ft. wide. It will cross the C. M. & St. P. Ry. on a 350 ft. viaduct, length of boulevard 3,400 ft.

KANSAS CITY, MO.—P. S. Brown, Jr., Chn. Pub. Improvements Co., writes us that the council passed an ordinance Dec. 4, in favor of opening and condemning Walnut St., 50 ft. wide, from 40th to 41st Sts.

ST. LOUIS, MO.—Steps are being taken by the council to improve Kings Highway at a cost of about $60,000.

DALLAS, TEX.—Hugh Raines, Cy. Engr., writes us that nothing has been done by the city toward asphalting Eway St.

DENVER, COLO.—The board has directed the city engineer to prepare plans for the proposed street improvements in the South Side.

MANUFACTURING PLANTS.

RUMFORD FALLS, ME.—It is reported that a mill for the exclusive manufacture of writing paper will be erected here, to cost about $3,000,000. A canal over a mile in length will also be constructed.

LYNN, MASS.—The General Electric Co., Schenectady, N. Y., is said to be preparing to erect an addition to its steel foundries in this place, to cost about $65,000.

LOCKPORT, N. Y.—The Lockport Iron & Steel Co. is being organized, to have $5,500,000 capital stock, and will erect a plant consisting of two blast furnaces, with a capacity of 500 tons daily, an improved Bessemer steel plant, 400 tons capacity, and a complete rolling mill, to be located on a 3,000-acre tract of land in the southwestern part of this town. Mayor C. G. Sutliff, Mgr. Lockport Rolling Mills; C. E. Dickinson, Pres. Franklin Mills Co., and E. J. Taylor are interested.

TROY, N. Y.—Roswell T. Brown is said to be organizing the Troy Refrigerator Co. to erect and maintain a cold storage refrigerator, to be capitalized at $50,000. Plans for the proposed plant are being prepared and the site will soon be chosen.

STEWARTSVILLE, N. J.—The John W. Cline farm has been purchased by a company of capitalists, headed by Thomas A. Edison, who will erect a $1,000,000 plant with a capacity of 5,000 bbls. a day, and works the deposits on the property.

EASTON, PA.—It is reported that the Canister Mfg. Co., Montreal, will locate a plant in this town, the citizens having agreed to pay $150,000.

MONESSEN, PA.—The Page Woven Wire Co., it is said, has purchased 35 acres of land for an extension to its plant at this place.

PITTSBURG, PA.—The Riter-Conley Mfg. Co. has received a contract for a 600-ton blast furnace from the American Steel & Wire Co. for its plant on Neville Island.——Wilkins & Davison, Engrs., Westinghouse Bldg., are preparing plans for the coke plant to be erected by the Continental Mining Co., at Smack Station, on the Redstone branch. The plant will have 100 ovens.

READING, PA.—The hosiery mill of the Nolde & Holst Co. was destroyed by fire Dec. 7, involving a loss reported at $275,000.

WILMINGTON, DEL.—The Diamond State Steel Co. has been issued a permit to rebuild its spike mill recently burned, a carpenter shop, and to make additions to the foundry.

NEWBERN, N. C.—It is reported that a new cotton duck mill is to be built in this vicinity by Baltimore capitalists, which will be supplied with the latest machinery, and will cost about $2,000,000.

ABBEVILLE, S. C.—The Abbeville Electric Light & Power Co. has increased its capital stock from $15,000 to $50,000, for the purpose of adding a roller mill to its plant.

JONESVILLE, S. C.—We are informed that no plans have been prepared for the proposed Alpha Cotton Mills, which will have one main brick building, equipped with electricity and automatic sprinklers, to cost about $20,000. Contracts for a 450-HP. cross compound Corliss engine and machinery, amounting to $50,000 in all, will be let in January. J. J. Littlejohn, W. L. Littlejohn and J. F. Alman are interested.

CARLTON, GA.—Local papers state that a cotton mill company, composed of capitalists from Athens, is making preparations for the erection of a mill on the site of the old Andrew mill on Broad River, 2½ miles from this place.

McRAE, GA.—A committee has been appointed to solicit stock for the proposed cotton factory, which will cost about $100,000. Plans have been agreed upon by the citizens, and $35,000 subscribed.

BIRMINGHAM, ALA.—W. P. Pinchard is said to have purchased the Chisolm water falls and shoals, with adjacent land, on which will be erected a modern cotton mill. The power from the falls will be used for operating the mill.

GREENVILLE, ALA.—R. H. Porter, Vice-Pres. The Peoples Mfg. Co., writes us that he is asking for estimates for a small outfit, including some cotton rope machinery for the company's mill.

HILLMAN, ALA.—The Grazelli Chemical Co., Cleveland, O., has purchased a site near this town on which it will erect a chemical works to cost about $100,000.

HUNTSVILLE, ALA.—The executive committee of the Huntsville chamber of commerce is making arrangements for a 50-acre site for a cotton mill of 50,000 spindles, to cost about $2,000,000, according to reports.

HUNTSVILLE, ALA.—Local papers state that J. W. Skinner Son propose to rebuild their new carriage factory on the old site. The building will have a basement and two stories, and will be equipped with new machinery for the manufacture of carriages and harness outfits.

PRATTVILLE, ALA.—It is reported that J. T. Floyd is chief promoter of the proposed new cotton mill for this town, to cost about $125,000. The machinery will be ordered at once.

LAUREL, MISS.—The Laurel Cotton Mill Co. has been organized with Geo. S. Gardiner, Pres., Laurel; H. T. Cottam, Vice-Pres., New Orleans, La.; and W. B. Rogers, Secy. and Treas., Laurel, Miss. The proposed mill will have 10,000 spindles for the manufacture of three-yard brown cloths, and will cost about $200,000.

HARRIMAN, TENN.—W. B. Crankley and others are completing arrangements for erecting a $100,000 cotton mill in this town, to employ 300 hands.

KNOXVILLE, TENN.—The Knoxville Knitting Mills, recently destroyed by fire, have secured a new site for the plant. Plans for the building, which will be two stories high, have not been completed. G. S. Andes, Pres.——The Utica Cabinet Co., is it said, will erect a factory in this city, for the manufacture of bedding supplies, etc. F. E. Howarth, Secy. and Mgr.

LOUISVILLE, KY.—A distillery with a mashing capacity of 2,500 bu. will be erected here by distillers, who will also erect a spirit house in Indiana with 10,000 bu. capacity, according to reports.

CINCINNATI, O.—Bids are wanted by the Bullock Electric Mfg. Co. for extending its main building 200 ft., making the main machine shop 500 × 101 ft.

COLUMBUS, O.—We are informed that the Columbus Iron & Steel Co. is ready to receive bids for its building with 2,000-HP. boilers. The company was recently incorporated with a capital stock of $400,000, by H. T. Marting and others, and will erect a blast furnace with 300 tons capacity.

TOLEDO, O.—Local papers state that one of the dismantled factories in this city, the Viking, is to be fitted with machinery for the manufacture of naphtha launches. The Loziers are said to be the promoters of the scheme in which $200,000 will be spent in fitting up the plant.

DETROIT, MICH.—Press reports state that the Solvay Process Co. proposes to make improvements to its plant in this city, amounting to $1,000,000. The work on the new buildings has begun, and negotiations are now being made for new machinery for the extensions. The present plant has a capacity of 250 tons a day, and it proposes to increase its capacity to 500 tons, which will necessitate enlarging every department. Wm. B. Cogswell, Mgr. Dir.; Edwd. N. Trump, Gen. Mgr.

BRIDGEPORT, ILL.—It is reported that work on the buildings of the new plant for G. A. Crosby & Co. has begun. A. H. Lowden, Arch.

SUPERIOR, WIS.—T. C. N. Peterson, of Peterson Bros., will organize a stock company capitalized at $300,000, to manufacture the multi-piston upright engine, of which he is inventor. A plant will be erected as soon as the company is incorporated.

BATH, ENGLAND.—The Bath Cold Storage & Ice Co. proposes, it is stated, to spend about $50,000 for an ice manufacturing plant. It is also reported that plants will be wanted by the Aberdeen Market Co., Aberdeen, Scotland, to cost $10,000; by the corporation council, Huddersfield, Eng., to cost about $15,000, W. H. Jessop, Mayor; and by the Waitara Freezing Works Co., Waitara and Patea, New Zealand, to cost about $60,000.

RUGBY, ENGLAND.—It is stated that the British Thomson-Houston Electric Co., Ltd., 83 Cannon St., E. C., London, England, which is the British representative of the Thomson-Houston Co., Schenectady, N. Y., is about to erect a plant near Rugby, to cost about $2,000,000, to be equipped with American machinery.

VLADIVOSTOCK, RUSSIA.—The Cramp Marine Improvement Co., recently incorporated by the shipbuilding firm in Philadelphia, Pa., with a nominal capital stock of $100,000, will construct docks, shipping arrangements, etc., at this place, according to reports.

CAPE TOWN, SOUTH AFRICA.—H. Steinmann, Arch. and Consult. Engr., 29 Broadway, New York, is reported to have sailed for London to perfect plans for the proposed brewery in Cape Town, for the South African Breweries Co., Ltd. Estimated cost, $300,000. It is said that the brewery will be equipped with American machinery, and that so far no contracts have been let. Mr. Steinmann will return about Jan. 15.

GAS PLANTS.

BENNINGTON, VT.—The Bennington Gas Co. has applied for a franchise.

FULTON, N. Y.—S. D. O'Donnell has been awarded the contract for boring a well for the Fulton & Phoenix Gas Co.

KALAMAZOO, MICH.—The Kalamazoo Gas Light Co. will spend about $50,000 next year in enlarging its plant.

NEW COMPANIES.—Point Gas Co., Shousetown, Pa.; $1,600; E. E. Lautner, Shamokin; A. S. Lawson, Shousetown; P. O. Laugtner, Corapolis.

Topeka Federal Light, Heat & Power Co., Topeka, Kan.; $1,500,000; J. Martin, Topeka; L. F. Randolph

MISCELLANEOUS CONTRACTS.

TUNNEL.—Park City, Utah.—James McGregor will, it is stated, build a 10,000-ft. tunnel near this city.

DRINKING FOUNTAINS.—Brooklyn, N. Y.—The council has approved sites for about 104 drinking fountains.

TELEPHONE.—Freemansburg, Pa.—The Easton Telephone Co. has been granted a franchise to build its line here.

TUNNEL.—Tacoma, Wash.—It is stated that the Penn Mining Co. will build a three-mile tunnel through the Cascades.

TELEPHONE.—Waterbury, Conn.—The council has granted a franchise to the Waterbury Automatic Telephone Co.

FIRE ALARM SYSTEM.—Bar Harbor, Me.—The Board of Trade is considering the question of installing a fire alarm system.

FIRE DEPARTMENT.—Havana, Cuba.—J. J. Scannell, Fire Comr., of New York, is to reorganize the fire department of Havana.

DREDGING.—Boston, Mass.—Bids are asked until Jan. 9 for dredging in Broad Sound, Boston Harbor. Col. C. R. Sutter, U. S. Engr.

PARK.—Atlantic City, N. J.—City Solicitor Godfrey is reported in favor of building a park along the beach outside the boardwalk.

ICE PLANT.—Morgantown, W. Va.—Bids are asked, according to reports, for an ice plant; capacity, 5 to 10 tons. L. L. Douthat.

BOILERS.—Washington, D. C.—Two 125-HP. return tubular boilers are wanted by the Corbett Mill Supply Co., 487 Missouri Ave., N. W.

RIVER IMPROVEMENT.—Kenton, O.—Bids are asked until Dec. 22 for constructing Scioto River Ditch improvement. A. R. Taylor, County Engr.

TELEPHONE.—Kalamazoo, Mich.—The Central Telephone Co. has increased its capital to $500,000 and will extend its lines. C. H. Seitz, Gen. Mgr.

MINES.—Des Moines, Ia.—The Illinois Steel Co., Chicago, is reported to be negotiating for the purchase of the iron ore deposits in Allamakee county.

DOCK.—Superior, Wis.—The Great Northern Ry. Co. will, it is stated, erect an ore dock on Allowez Bay, capacity 60,000 tons, to cost about $50,000.

DRAINAGE.—Fall River Mills, Cal.—It is stated that Frank McArthur is interested in the plan to reclaim about 13,000 acres of land by building a canal.

TUNNEL.—Wyoming.—It is stated that the Union Pacific R. R. will build a seven-mile tunnel through Sherman Hill. H. G. Burt, Pres., Omaha, Neb.

SUBWAY.—Toronto, Ont.—The aldermen are in favor of the plan of C. H. Rust, Cy. Engr., for a subway at the Lansdowne Ave. crossing, to cost about $35,000.

DOCKS.—Stapleton (S. I.), N. Y.—It is stated that the Compagnie Generale Transatlantique will purchase water front from Mrs. G. Bechtel for docking purposes.

TUGS.—New York, N. Y.—Bids are asked until Dec. 15 for furnishing a number of tugs for the transport service. Maj. F. B. Jones, Q.-M., Army Bldg., Whitehall St.

HARBOR IMPROVEMENTS.—Port Colborne, Ont.—J. I. Tarte, Minister Pub. Wks., Ottawa, has plans for harbor improvements to cost about $500,000, according to reports.

MACHINERY.—New Orleans, La.—Bids are asked until Jan. 12 for furnishing machinery for removing water hyacinths. Maj. H. M. Adams, U. S. Engr., Custom House.

TUNNEL.—Pittsburg, Pa.—The Pittsburg & Lake Erie R. R. Co. has let the contract for constructing a tunnel under Smithfield St., to Patton and Gibson, 531 Wood St.

DOCKS.—Buffalo, N. Y.—The Lehigh Valley R. R. has asked for a grant of 6,232 × 1,600 ft. of submerged land now being developed, on which it will erect a private dock.

MINING.—Flemington, N. J.—It is stated that a New York company is negotiating for the purchase of 500 acres of land, and will reopen the Flemington copper mines.

TUNNEL.—Chicago, Ill.—The Chicago River Commission has recommended the lowering of the tunnels under the Chicago River to cost about $700,000. Alderman Raymer, Chn. Com.

DREDGING.—Delaware River, Pa.—The war department has approved the bid of the Virginia Dredging Co., 100 S. 7th St., Richmond, for dredging, etc., below Reedy Island, at $375,280.

DITCH.—Norwalk, O.—The commissioners of Huron, Sandusky and Erie counties are considering the question of cleaning, widening and deepening the Big Ditch, at a cost of $15,000.

TUNNEL.—Chicago, Ill.—L. E. McGann, Comr. Pub. Wks., has prepared plans, etc., for a tunnel connecting the North and South Side Boulevard systems, to cost about $5,500,000.

STONE.—St. John's River, Fla.—The contract for furnishing 92,000 tons of stone in place in jetties at mouth of St. John's River was let to R. G. Ross, 720 Hogan St., Jacksonville, at $207,760.

BREAKWATER.—Michigan City, Ind.—Bids are asked until Jan. 13 for erecting a breakwater, as stated in our advertising columns. Capt. Chester Harding, U. S. Engr., Grand Rapids, Mich.

TUNNEL.—New York, N. Y.—The council has authorized the spending of $50,000 for soundings for a tunnel from Whitehall St. to Hamilton Ave., South Brooklyn, and at Staten Island.

ORE DOCK.—Duluth, Minn.—The Duluth, Missabe & Northern Ry. Co. has let the contract for building an ore dock, with a capacity of 40,000 tons, to Barrett & Record Co., Corn Exchange, Minneapolis.

CANAL.—Yuma, Ariz.—It is stated that W. W. Martin, Sespe, Cal.; L. O. Toland, Tustin, Cal., and N. W. Blanchard, Santa Paula, Cal., are interested in the plan to build a canal in the Cibola Valley.

WHARVES.—San Francisco, Cal.—T. C. Friedlander, Harbor Commissioner Kilburn and State Engineer Holmes, Sacramento, are said to be in favor of lengthening the wharves in sections 1, 2 and 3.

DREDGING.—Savannah, Ga.—Bids are asked until Jan. 8 for dredging between Beaufort, S. C., and Savannah, through Mud River, as stated in our advertising columns. Capt. G. E. Gillette, U. S. Engr.

FIRE ENGINE AND HOSE.—Jersey City, N. J.—Bids are asked until Dec. 19 for furnishing two second size fire engines and about 3,250 ft. 2½-in. rubber-lined fire hose. Jas. Hennessey, Chn. Com. Supplies.

MINING.—Houghton, Mich.—The Oneida Copper Co. recently organized with $2,000,000 capital, has taken the old Delaware mine and 30 sq. miles of land in Keweenaw county. C. H. Palmer, Pres., Boston, Mass.

PIERS.—New York, N. Y.—The Sinking Fund Commission has approved plans of the Dock Board to replace the 13 piers between Wall and Whitehall Sts., by 10 new ones, each to be 580 x 100 ft., to cost about $7,000,000.

ENGINES AND PIPING.—Port Penn, Del.—Bids are asked until Dec. 16 for furnishing a hot air engine and piping for the Marine Hospital service, Reedy Island Quarantine. A. R. Thomas, Past Asst. Surgeon.

LEVEE WORK.—Pleasant Hill, Ill.—A. W. Newton, Pittsfield, Ill., has completed estimates for 98,000 cu. yds. of excavation for the Six-Mile Levee Drainage District at Pleasant Hill. Contracts will soon be let for the work.

DOCKS.—Roxbury, Mass.—J. C. Cobb, of Milton, has applied for a charter for the Roxbury Wharf & Terminal Co., which has secured 3,000,000 sq. ft. of land on Sweet St., on which it proposes to erect docks and terminals.

RIVER IMPROVEMENTS.—Sacramento, Cal.—It is stated that work will soon be started on certain improvements in the Sacramento and San Joaquin rivers, for which $180,000 has been appropriated. F. D. Ryan, Comr. Pub. Wks.

TELEPHONE.—Wilmington, Del.—The Delmarvia Telephone Co. has applied for permission to extend its conduits in this city.——The council has granted the Delaware & Atlantic Telegraph & Telephone Co. permission to extend its line on 6th St.

JETTIES.—Philadelphia, Pa.—The port wardens have granted the Cramp Shipbuilding Co., the Terminal Land Co. and another company permission to build three jetties, and to the Lehigh Coal & Navigation Co. to build a bulkhead across its dock, near the Aramingo Canal.

DREDGING, ETC.—Pittsfield, Ill.—The board of Sny Island levee drainage district commissioners contemplates about 500,000 yds. of dredging and about 55 miles of clearing, 300 ft. wide, for drainage purposes. A. W. Newton, Engr., Pittsfield; S. E. Hewes, Secy., Quincy.

STEAMSHIP LINE, ETC.—New London, Conn.—Reports state that the Inter-Colonial Steamship Line plans a transatlantic line of freight steamers from New London to some British port. The project has the support of the Grand Trunk R. R. Co., and contemplates the forming of a company, with $500,000, to build an 800,000-bu. grain elevator at East New London.

BRICK PAVING.—Gallipolis, O.—We are informed that the following bids were received Dec. 4, 1899, for 14,990 yds. of brick paving, 7,050 lin. ft. curbing, 75 ft. circular curb, etc.; T. E. Bradbury, Cy. Clk.; M. T. Leonard, Cy. Engr.:

Bidder.	Paving.	Curb—Berea.	Curb—Circular.	Curb—Gutter crsng.	Total.
Juniper & Welch, Nelsonv'le.	$0.81	$0.45	$0.78	$99.00	$15,472
George Bower, Pomeroy, O.	.92	.42	.63	110.00	16,969
Beeson Bros., Middleport, O.	.90	.45	.60	200.00	16,908
T. J. Mulligan, Ironton, O..	1.03	.41	.50	100.00	18,468
A. M. Slaymaker, Pt. Clinton	.98	.44	.59	175.00	17,562
G. M. Snider, Columbus, O.	.98	.44	.51	269.40	18,100
A. G. Pugh, Columbus, O...	.87½	.46	.46	170.00	16,564
H. P. Stricher, Toledo, O...	.93	.45	.66	100.00	17,263

SEWER TRENCH.—St. John, N. B.—The following bids were received by the civic board of management Nov. 23, 1899, for digging a sewer trench in Victoria Lane: Alex. McDonald, rock, $2.45 a lin.ft., and earth 45 cts.; Sullivan & Weldon, rock $3.45, earth $1.00.

DREDGING.—Everett Harbor, Wash.—We are informed that Capt. Harry Taylor, U. S. Engr., Seattle, Wash., received the following bids Nov. 28 for dredging in Everett Harbor:

Bids Received at Seattle, Wash., Nov. 28, 1899, for Dredging in Everett Harbor, Wash.

Bidder.	Dredging, 2,350,000 cu. yds.	Piles, 28,000 lin. ft.	Lumber, 65,000 ft. B.M.	Fascines, 2,500 cords.	Stone, 1,900 tons.	Total
Dundon Bridge & Construction Co., San Francisco, Cal.	$0.133	$0.09	$12.93	$1.77	$1.00	[illegible]
W. W. Concanon, San Francisco, Cal.	.16	.14	14.00	2.00	2.00	389,630
Puget Sound Dredging Co., Seattle, Wash.	.12⅞	.06	9.90	1.70	.90	310,846
H. O. Geiger, Tacoma, Wash.	.18	.12	20.00	3.50	.85	438,025
Hingston & Woods, Buffalo, N. Y.	.13¼	.28	30.00	2.25	.99	528,671
Seattle Bridge Co., Seattle, Wash.	.09	.08	14.00	3.00	.95	[illegible]
Rydstrom & Goerig, Tacoma, Wash.	.13¾	.10	15.00	1.75	.80	332,735

STREET SWEEPERS.—New York, N. Y.—The following bids were received Dec. 12, 1899, by the department of street cleaning for 28-horse sweeping machines and 100 (1) can carriers: D. J. Barry, 84 West Broadway, $350; Studebaker Bros. Mfg. Co., Prince St. and Broadway, $250; Thos. Hill, Jersey City, (1) $12.50 each; Fox Bros. & Co., 24 Vesey St., $344; Chas. H. Vass, 500 E. 18th St., $174.50; F. C. Austin Mfg. Co., Harvey, Ill., $222.50 and $244.50; (1) $9.50.

SEWER.—New York, N. Y.—The following bids were received Dec. 6 for a sewer in Broadway, from city line to Riverdale Ave., and to the Harlem River:

MACADAM PAVING.—Alton, Ill.—Z. B. Jones has been awarded the contract as follows for macadam paving in Washington St., using a 5-ton road roller: Curbing, 45 cts. a ft.; macadam, $3.60 a sq. yd.; brick, 97½ cts. a sq. yd.

BRICK PAVING.—Asheville, N. C.—B. M. Lee, Cy. Engr., writes us that the contract for 12,000 yds. of brick paving has been let to the Southern Construction Co. at about $1.90 a yd., without advertising.

LEVEE WORK.—Lake Providence, La.—C. P. Leper is reported to have been awarded the contract, at 13.97 cts., for 83,000 yds. of levee work at Cottonwood. Ernest Hyner submitted a bid at 13.75 cts.

INDUSTRIAL NOTES.

THE WATSON-STILLMAN CO., 204-210 E. 43d St., New York, has established a branch office at 455 Rookery Building, Chicago.

THE RICHMOND LOCOMOTIVE & MACHINE WORKS, Richmond, Va., is reported to have received an order from the Southern Ry. for 41 locomotives of which 31 are heavy freight engines. The remaining ten are for passenger service, and their equipment will include electric head-lights.

THE BULLOCK ELECTRIC MFG. CO., Cincinnati, is asking for bids to extend its main building 200 ft., making the main machine shop 500 ft. long by 101 ft. wide. The company reports an immense business, orders coming from all over the world.

THE BALDWIN LOCOMOTIVE WORKS, Philadelphia, is reported to have completely built 104 locomotives during the 26 working days in October, and at present to be employing 7,250 men. The use of electrical machine tools and electric cranes is said to save the employment of no less than 300 men. Orders are being received from all over the world.

Bids Received at New York, N. Y., Dec. 6, 1899, for Constructing a Sewer in Broadway.

Bidder.	Double sewer—Class I., 7,216 lin. ft.	Double sewer—II., 5,031 lin. ft.	Double sewer—III., 3,240 lin. ft.	Double sewer—IV., 695 lin. ft.	Spurs, 1,600 each.	Manholes, 103 each.	Rock, 25,000 cu. yds.	Brick masonry, 25 c. yds.	Concrete, 8,000 c. yds.	Rubble masonry, 2,000 c. yds.	Broken stone, 26,000 c. yds.	Timber, 2,700,000 ft. B.M.	6 to 18-in. drains, 200 lin. ft.	Piles, 450000 lin. ft.	Total
Naughton & Co., 271 Broadway	$72.50	$16.00	$7.50	$2.00	$0.50	$60.00	$2.00	$13.50	$6.50	$4.50	$1.30	$32.00	$1.50	$0.25	$980,063
Michael Redmond, Jerome Ave.	43.90	43.90	43.90	43.90	1.00	100.00	3.00	20.00	.01	1.00	2.00	35.00	1.00	.30	1,081,569
Wm. F. Norton & Co., 147 East 125th St.	61.16	16.38	8.47	2.00	.40	40.00	2.00	10.00	4.00	3.50	1.50	29.25	2.00	.22	863,956
Bart Dunn, 321 East 68th St.	60.23	15.98	9.50	4.83	.50	38.00	1.50	8.00	4.00	3.00	1.00	25.00	1.00	.18	804,205
Thielmann & Smith, 303 West 93d St.	74.00	18.00	12.00	4.00	1.00	60.00	.50	10.00	....	4.00	1.50	30.00	2.00	.15	882,632
Farrell & Hopper, 125th St.	87.00	19.00	10.00	3.50	.50	50.50	2.25	11.00	5.50	4.50	1.25	35.00	1.50	.25	1,113,540
B. J. Sullivan, 240 West 104th St.	71.79	17.31	7.98	4.30	.50	50.00	1.00	12.00	6.00	6.00	1.50	30.00	1.00	.16	917,416
John J. McQuade, 201 East 89th St.	65.31	23.81	11.11	2.50	.60	40.00	2.50	8.50	3.50	3.50	1.00	23.00	2.00	.125	891,941
John C. Rodgers, 217 West 125th St.	73.50	15.00	8.50	4.00	.60	55.00	1.50	12.00	....	...	...	20.00	1.00	.20	824,786
James Pilkington, Fort Washington Park.	73.00	12.00	5.00	2.00	.01	20.00	1.00	16.00	.01	.01	2.00	30.00	.01	.15	832,808
Cunningham & Kearns, 312 East 84th St.	70.83	27.90	9.85	6.50	1.00	50.00	2.00	10.00	2.75	2.00	.50	26.00	2.00	.15	922,095
Charles R. Baird, 337 East 63d St.	64.81	22.00	15.31	3.80	.29	71.30	2.30	11.50	4.60	4.03	1.61	30.00	2.30	.15	931,871

LIGHTHOUSE, ETC.—San Francisco, Cal.—Plans have been prepared by Maj. Chas. E. L. B. Davis, U. S. Engr., for a lighthouse and fog signal building at Point Arguello, 12 miles north of Point Conception, to cost about $35,000.

DRAINAGE.—Mauston, Wis.—The commissioners of the Little Yellow Drainage District have recommended the construction of ditches to drain about 50,000 acres.

IRON LAND DEVELOPMENT, ETC.—Cuba.—The Cuba Steel Ore Co., Philadelphia, Pa., which is reported to have bought 2,000 acres of iron ore land in Guama, eastern end of Cuba, is making arrangements for its development. A contract for a steel pier, 1,000 ft. long, and several bridges between the pier and the ore mines, a distance of 10 miles, has been let to the Pennsylvania Steel Co., Steelton, Pa.

REMOVING PIER.—San Francisco, Cal.—The following bids have been received for removing the present pier at Howard No. 3 and erecting a 455x100-ft. cylinder pier in its place: City Street Improvement Co., 10 Mills Bldg. (accepted) ,$46,198; Dundon Bridge & Construction Co., $66,000; Darby Laydon, $51,187; Pacific Construction Co., $55,598; A. W. Burrell, $64,770; Cotton Bros., $56,674; A. McMahon, $48,947; Atlantic, Gulf & Pacific Co., $52,441; Healy, Tibbitts & Co., $59,995.

TELEGRAPH LINES.—Asia Minor.—Reports state that a telegraph company which has just been formed in Berlin will parallel the Bagdad Ry. with wires. This line, from Constantinople to Basra, being operated in connection with the German-owned cable from the Turkish capital to Bucharest, and the German telegraph line thence to Berlin, will give a clear telegraphic right of way to the Persian gulf. It is likely that information can be secured by addressing the Deutsche Bank, Constantinople.

TUNNELLING, ETC.—Cambria, Wyo.—We are informed that the reports of the operations being done near Ragged Top, S. Dak., by the American Mining Co., Cambria, greatly exaggerate the extent of the work. The company contemplated putting in water power this fall, but has given that up for the present, and the work consists now in driving a small prospect tunnel from Spearfish Canon and sinking shaft in about same place. This work is entirely in the nature of prospecting or development work usual in a mining country. The shaft will probably be about 400 ft. deep by the time quartz is reached, and it is then proposed to drive a tunnel towards the shaft, which is about 6,000 ft. distant, but until the work develops ore bodies it will be entirely in the nature of a prospect.

CONTRACT PRICES.

CANAL WORK.—Tampico, Ill.—Maj. W. L. Marshall, U. S. Engr., Chicago, received the following bids Dec. 2, 1899, for three miles of feeder on the Illinois & Mississippi Canal, near Tampico:

Bidder.	Earthwork on miles—9, 102,684 cu.yds.	10, 43,873 cu.yds.	11, 143,620 cu.yds.
T. W. Kinser & Sons, Terre Haute.	$0.109	$0.21	$0.21
Katz & Callahan, Omaha, Neb.	.107	.20	.28
Geo. R. Bennett, Chicago, Ill.	.17	.27¾	.278
Pound Construction Co., Chicago	.105	.20	.20
Benezette Williams, Chicago	.0945	.1645	.165

SEWER.—New York, N. Y.—The following were the lowest bids received Dec. 6 for a sewer in E. 163d St.:

Quantities.		John J. O'Brien, 258 Broadway.	Wm. J. Dempsey New York.	Patrick McNeirney, 178 E. 85th St.
12-in. pipe sewer	1,160 lin. ft.	$8.50	$8.00	$2.25
Spurs	300 each	.75	.50	.50
Manholes	13 "	50.00	40.00	50.00
Receiving basins	2 "	150.00	150.00	150.00
Rock	2,400 cu. yds	...	.35	2.50
Concrete	5 " "	...	.10	1.00
Rubble masonry	5 " "	...	.10	1.00
Broken stone	5 " "	...	.10	1.00
Timber	3,000 ft. B.M.	...	1.00	10.00
6 to 18-in. drains	30 lin. ft.	...	.10	1.00
Total		$11,059	$10,857	$9,785

REBUILDING WHARF.—Buffalo, N. Y.—Maj. Thos. W. Symons, U. S. Engr., received the following bids Nov. 30 for rebuilding the wharf at the light-house depot; all are local bidders:

Bids Received at Buffalo, N. Y., Nov. 30, 1899, for Rebuilding the Wharf at the Light-House Depot.

Quantities.		A. F. Chapman & Co., 476 Ellicott Square.	Buffalo Dredging Co., 305 D. S. Morgan Bldg.	Jas. B. Donnelly, 896 Ellicott Square.	Crage & Tench, 61 Terrace.	Leh & Co., Michigan & Ganson Sts.
Removing old dock structures	565 lin. ft.	$4.00	$1.54	$5.20	$1.50	$2.60
Excavating	2,500 cu. yds.	.50	.35	1.15	.40	.45
Dredging	6,000 " "	.18	.24	.45	.24	.18
Oak piles in work	360 each	7.00	6.50	7.50	8.30	7.50
Sheet piling in the work	540 "	4.25	3.98	6.00	3.85	4.20
Oak timber in the work	38,000 ft. B.M.	36.00	35.00	45.00	38.00	40.00
White pine (or yellow, $36) timber	156,000 " "	40.00	35.00	40.50	37.00	35.00
Iron and steel, bolts, etc.)	39,000 lbs.	.05½	.05	.04	.05¼	.04
Total		$19,158	$16,414	$24,041	$17,618	$17,182

BRICK PAVING.—Louisville, Ky.—Bids were received by the department of public works Nov. 27, 1899, for 15 blocks of brick paving, ranging from $14.50 to $15.35 a square of 100 sq. ft. Bids were submitted by John R. Gleason, Geo. Gosnell, Lee Figg and Chas. V. Mehler.

SIDEWALK.—Montclair, Colo.—The following bids were received Nov. 25, 1899, for a 4-ft. flagstone sidewalk: J. Fred. Roberts, 55¾ cts. a lin. ft.; D. J. Tirsway, 55¾ cts.; Sites & Buell, 51 cts.

ELECTRIC LIGHTING.—Riverside, Cal.—We are informed that the Redlands Electric Light & Power Co., Redlands, Cal., submitted the only bid Nov. 7, 1899, for electric lighting for the Southern California hospital, at $200 a month for 550 16-c. p. lights and at $125 a month for 30 HP.

BRICK PAVING.—Columbus, O.—N. B. Abbott has been awarded the contract as follows for brick paving in Champion Ave.: Wassall block, $1.25 a sq. yd.; 5-in. curb, 35 cts. a ft.; 5-in. circle curb, 70 cts. a ft.; redressing old curb, 10 cts. a ft.; resetting same, 10 cts. a ft.; stone edging, 20 cts. a ft.; catch basins, $25 each; 15-in. sewer pipe, 60 cts. a ft.; 4-in. subdrainage sewer pipe, 5 cts. a ft.; grading and excavation, 33 cts. a cu. yd.

McINTOSH, SEYMOUR & CO., Auburn, N. Y., have a large number of orders for engines for export, including three for the tramway in Lisbon, Portugal. Other engines are for Kimberly, South Africa, Buenos Ayres, Argentina, Mexico and Japan. It is said that all these engines are for electrical purposes.

THE BOSTON BLOWER CO., Hyde Park, Mass., is unusually busy, having made the largest shipments within the past month of any during the history of the company. Among the more important heating and ventilating apparatus installed within the past few weeks are plants for the following: Liberty Wall Paper Co., Schuylerville, N. Y.; Standard Silk Co., Phillipsburg, N. J.; Prentice Bros. Co., Worcester, Mass.; Benj. Eastwood Co., Paterson, N. J.; Brown & Sharp, Providence, R. I.; Structural Iron Works, Baltimore, Md.

THE GENERAL ELECTRIC CO., Schenectady, N. Y., has an order for dynamos and motors aggregating about 1,000 K-W., to be used in the Deep Leads transmission mining system in Australia, for which J. G. White & Co., of 29 Broadway, New York, are the engineers. The company has the contract also for 100 complete car equipments and three generators for the Havana Electric Ry. Co.

C. O. BARTLETT & CO., 43 Centre Ct., Cleveland, O., have the contract to build a four-compartment "Grill" dryer for the Castalia Portland Cement Co., Castalia, O. The dryer will have a cylinder 48 ins. diam. and 27 ft. long, and will have a drying capacity of 100 tons of slack coal in 24 hours. The contract calls for the dryer to be running within four weeks.

THE BERLIN IRON BRIDGE CO., East Berlin, Conn., is to furnish a steel boiler house for the Ansonia Brass & Copper Co., Ansonia, Conn. The building will be covered with the Berlin Iron Bridge Co.'s patent anti-condensation roof covering. The company will also furnish the extension of the furnace building of the Raritan Copper Works at Perth Amboy, N. J., and has nearly completed for the American Ordnance Co., of Bridgeport, Conn., a new machine shop, with traveling cranes, runways, etc. The building is to be covered with the Berlin Iron Bridge Co. patent anti-condensation corrugated iron roof covering.

The New Advertisements on Page XXI ("Wants") and Pages XXII--XXIII ("For Sale") May Interest You.

THEY GROW——Possibly They Bring Results——TRY THEM

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